Stafford Royal 1829

THE LONDON

Medical and Physical Journal.

3 OF VOL. XLII.] SEPTEMBER, 1819. [NO. 247.

"For many fortunate discoveries in medicine, and for the detection of numerous "errors, the world is indebted to the rapid circulation of Monthly Journals; "and there never existed any work to which the Faculty in EUROPE and "AMERICA were under deeper obligations than to the Medical and Physical "Journal of London, now forming a long, but an invaluable, series." RUSH.

Original Communications.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

On the Morbid Effects of an Oppressed Brain. BY DR. KINGLAKE.

THE healthful functions of the brain are so extensive and complicated, that not the slightest deviation can happen from the natural state of that organ, without inducing a greater or less degree of disease. Constituting as it does in the animal economy the grand source of vital energy, it cannot in any measure be disordered, without being attended by morbid effects characteristic of the particular ailment that may have occurred. The provisions of nature are large for its security; its mechanical defences are of the most appropriate and efficient kind: but, with all this natural immunity, the brain is liable to great, manifold, and irremediable injuries, from various causes. It is not intended, at present, to discuss the mischiefs that may arise from external violence, but more particularly to advert to some of the leading morbid effects that result from the influence of internal causes.

An oppressed state of brain is at all times a disease of vast moment. However it may have been induced, it is enough to know that it actually exists, to require the earliest and most unsparing endeavours for its timely removal. In this inquiry, it is material to distinguish between the instances of oppressed brain from causes originating in the cerebral organ itself, and such as may have sympathetically extended the morbid effect from other parts of the system. The effects resulting from these primary and secondary causes of disease may not be widely different, yet it would be practically important to discriminate the one from the other, for the purpose of more immediately applying the proper remedy to the affected part. An oppressed brain may directly originate from either increased arterial action, congestive fullness of vessel, extravasated fluids, or from

diminished nervous energy. In the first place, the augmented impetus of blood to the brain would be apt to induce severe head-ach, watchfulness, and raving delirium; whilst, in the three latter, stupor and comparative insensibility would probably arise. In the former case, the system at large sympathizing with the affected brain, would assume an excessive degree of arterial action; but, in the latter instances, torpor and deficient excitement, would restrain and depress the active energies of life.

These two opposite states equally derange the nervous system, and tend to induce deep, extensive, and various disease, throughout the whole frame. Without a due degree of nervous energy, it is not possible for either the bodily or mental functions to be healthfully performed. Disorder and confusion are in the train of the irregular action occasioned by either excessive or deficient excitement of nervous influence. Lodged in a bony cavity, and supplied with blood through arteries directed in a tortuous course, the brain is secured from injury from slight causes. Circumstances must be unfavourable, and must concur in producing considerable violence, before an hurtful impression can be made on the great citadel of life and health. When, however, an inroad has been made on its healthful condition, when the distinct and connected harmonies of its power and efficiency are disconcerted, the consequences are afflictingly experienced, in diseases corresponding to the particular nature and influence of the offensive agency that may have been exerted. When an oppressed state of the brain has so stimulated the sensorial power as to have induced agonizing pains in the head, and to have awakened painful sympathies in other parts of the body, the disease must be regarded as one of immoderate nervous excitement, in which the sensibility, which in natural circumstances would be undisturbed, is here distempered and thrown into agitations and commotions, that constitute acute affections of the nervous system of the worst form. The ferocious kinds of mania and of phrenzy are examples of this severe affection.

In these cases, the sensorial power is not only inordinately excited, but is also so vitiated as to induce painful feelings, that are never experienced but as the effects of morbid sensibility. The vast range which the sphere of feeling affords, is closely occupied by the endless variety of sensation which the disordered state of nervous influence is capable of generating; feelings, indeed, which have no existence in the natural state of things, and which grow out of the distempered condition in which the organs of sense are placed. The excessive action which lies at the root of this disordered feeling should be subdued without delay, lest it should establish itself by habit, and

ultimately render incurable, what, at an earlier period, might have been radically overcome.

Persons of robust stamina, whose constitutions are unbroken, and who have been exposed to the pernicious influence of strong and distressful impressions, whose passions of mind have been intemperately acted on, who have been subjected to situations of keen and afflicting trial, and who have had to sustain protracted conflicts in unequal and disadvantageous contests, are those who are apt to become the unhappy victims of morbid sensibility connected with immoderate excitement. The brain, in such circumstances, is oppressed, but not so as to depress its vital energies: on the contrary, they are greatly excited by the vascular fulness that prevails. In the instances in which congestive plenitude has obtained in the brain, by which the active energies of the nervous system are depressed, the injury that ensues is less formidable in apparent violence, but equally dangerous in its probable issue. Whether nervous energy be excessively or deficiently exerted, the morbid effects of either state are strikingly manifested. Active or passive mischief is the direct result: in the latter case, torpor becomes the unwieldy and unimpressible obstacle to relief. Where a remedy can make no impression, no effect can be produced. This is the case in both the local and general torpor occurring in the brain and nervous system, when the cerebral organ is oppressed by a too tardy motion and congestive accumulation of the circulating fluids in its substance. This oppressed state, with insufficient energy to re-act and propel the lingering fluids, forms a prolific source of nervous diseases. They present, under an almost infinite variety of aspects and shades, from a sense of languor and dejection of mind, to corroding melancholy, despondent mania, apoplexy, palsy, and syncope. The gradations between these several states of disease are numerous, and may be justly said to comprehend the vast trains of nervous diseases that have equally embarrassed the nosologist to class, and the patient to describe.

If an oppressed brain from diminished energy be allowed to remain, its morbid effects will not be confined to the more immediate derangement of the nervous system, but will, through ganglion, and other sympathetic influence, disorder the functions of other viscera. The heart will partake in the mischief, becoming, according to circumstances, either unduly irritable or morbidly torpid. Its action will be either too quick and irregular, or too slow and irregular: in either case, a palpitating labour at the organ itself, and a disordered arterial circulation, will be the consequence.

The stomach and digestive organs will also soon share in the torpifying effects of an oppressed brain: the gastric and enteric juices will be deteriorated, and the digestive, assimilative, and

chylipetive processes will be rendered imperfect, and unequal to supplying the system with such nourishment as the exigencies of life and health may require. The liver, lungs, kidneys, urinary bladder, &c. will soon participate in the paralyzing influence of an oppressed nervous energy. These viscera will be severally disabled in their respective functions. The biliary secretion, respiration, the formation of urine, its expulsion and retention, will be distinctly or collectively affected, as the weight of torpor and inaction may more particularly fall on one or all of these organs.

Although the brain may be justly regarded as the source of nervous power, as the main organ of sensation, from which the mandates of the will are issued and transmitted to all and every part of the frame; and to which the sensations of the same whole are referred, and by which they are recognized; yet it must be allowed, that the spinal marrow, the various pairs of nerves, and more especially their ganglion or confluent points, are also sentient portions, from which emanate no small share of nervous influence. It is to those parts of the nervous system that must be attributed the morbid effects often insidiously produced on the brain, by a deranged state of the first passages. It is well known that disordered digestion will so affect the sentient nerves of the stomach, as to induce vertigo, and even apoplectic abolition of all power of sense and motion. The heart also will intermit in its action, pending dyspeptic oppression of stomach.

An undue detention of venous blood in the liver, owing to a deficient secretion of bile; obstructed respiration, whether from glandular enlargement, vascular torpor, or serous effusion; renal inaction, surcharging the circulating fluids with the superfluous water destined to be removed by urinary secretion; or diminished perspiration; may so overburthen the sanguiferous vessels, as to occasion serious, and even destructive, oppression on the brain. It is by no means an unfrequent occurrence, for patients who are supposed, from impeded respiration, to have water in the cavity of the thorax, whether in the cellular structure of the lungs or more at large in the pleuretic bag, to be attacked suddenly with a fit of apoplexy. The venous plethora that results from the obstacle that is opposed to the blood in its passage through the lungs, must very directly have the effect of loading the brain to an extent that will sufficiently explain the destructive attack of apoplexy that occasionally arises from it.

In all cases of disease from an oppressed brain, founded in torpor or diminished vital energy, it is obvious that the endeavour should be to remove the hurtful cause in the most direct manner. In these instances, the morbid state is not so much owing to exhaustion of power as to its depression: it would

therefore be injurious to resort to the use of stimulants, in the calculation of salutarily exciting the torpid state under which the patient appears to suffer. That mode of treatment would be likely to aggravate the mischief, by exciting vascular action, and propelling an additional incumbrance on the oppressed brain. The indication of cure, then, is so far to deplenish the vessels, by bleeding and procuring evacuations from the bowels, as to relieve the load already accumulated, and to enable the torpid vessels to exert such transmitting action as may prevent a recurrence of the oppressive fulness. With the removal of the oppressing weight from the brain the nervous energy will be restored, and renewed strength and harmony will be distributed and re-established throughout the system.

Abstinence from fermented liquors and from full meals will be essentially requisite, either in obviating a primary accession, or in preventing the recurrence of the morbid effects of an oppressed brain. In all visceral diseases connected with any degree of obstruction to the circulating fluids, vascular depletion, both by blood-letting and sufficient alvine discharges, should be esteemed indispensable. If these means be not timely employed, much danger will exist of the patient's being cut off, either by an apoplectic attack, by spasmodic difficulty of breathing, by suffocating hemoptöe, or by syncope. The indiscriminate adoption of tonic and stimulating treatment, in what are regarded as nervous affections, and in chronic visceral diseases, has had its hecatombs of victims. Instead of relieving vascular fulness, and other causes depressing and rendering torpid the active energies of life, under the delusive bugbear *debility*, a well-intended, but often destructive, attempt has been made to renovate the lost strength, by the very means that must have powerfully aided in additionally oppressing, and finally in extinguishing, life itself. Indeed, whatever distinctions may be made as to the morbid modes and conditions by which apoplexy may be induced, the effect in every instance is so much the same as to require, for the most part, similar treatment. The oppressed state of the brain, in every example of this disease, requires the most prompt and efficient relief. Delay is not only dangerous, but almost necessarily destructive. Nervous energy may be depressed, and even considerably exhausted, compatibly with life; but cannot be durably prostrated by apoplectic pressure, without incurring certain death. Under the most favourable circumstances, the chance of rallying is too distant to rest any reasonable expectation on it: the mortality of this disease is in an appalling proportion to the recoveries which happen. My own experience has been considerable in this malady; but the cases, in my observation, that have terminated favourably are almost eclipsed by those which have ended

fatally. Practical opportunities for seeing much of apoplectic disease have convinced me that the most efficient mode of relieving it, is by ample bleeding. Drawing blood from the arterial system on this occasion would seem to be preferable to venous bleeding; as the former would more directly diminish the impetus of the circulation on the brain, than could be effected by the latter. The temporal artery is convenient for this purpose, and will generally be found to yield the utmost quantity of blood that it may be expedient to abstract. If difficulties should occur in obtaining blood from the temporal artery, it may be sufficiently taken from either the jugular or brachial veins. In three cases of apoplexy, treated by very copious bleeding at intervals of about eight hours, for several successive days, until consciousness, the power of speech, and voluntary motion, were restored, final recovery was effected. The bowels were also at the same time briskly excited and evacuated. Extensive blistering of the scalp was likewise employed. But in other instances, in which more moderate bleeding was practised, together with brisk cathartics and vesication on the head, no perceptible benefit was obtained, and the issue was mortal. It appears therefore fair to infer, that the main remedy in apoplectic cases, is early and extensive vascular depletion. The state of arterial action will afford a sure guide as to how far the practice may be carried. It will be found that the action of the heart and arteries will acquire increased freedom and force, as the repeated bleedings have the effect of lessening the stupefactive pressure existing on the brain. Generally speaking, it would perhaps be a safe practical rule to persist in bleeding to the extent of twelve ounces every six hours, whilst the state of the pulse will admit of it, until some beneficial effect be produced. The slightest appearance of returning consciousness, vision, power of speech, or of voluntary motion, should be a warranty to proceed in the use of the remedy as long as arterial action will bear it, and the recovering state of the disease may require its continued aid.

Vascular fulness, distension, and pressure, appear conjointly to produce the abolition of sense and power of motion occurring in apoplectic paroxysms. This state will paralyze the nervous system beyond retrieval, if it be suffered to continue longer than may be necessary to give effect to the remedies that may be employed. To make room in the sanguiferous vessels, and to cause them to contract on their diminished contents, by large and persevering bleedings, would seem to be the most reasonable mode of endeavouring to render effectual benefit. If arterial action should flag under the use of large and repeated bleedings to such a degree as to contra-indicate a farther prosecution of the treatment, the more topical mode of relieving on the same

principle, by cupping between the shoulders and on the shaved scalp, would be advisable. It may be presumed, that unnecessary apprehension is entertained respecting extreme bleeding in apoplectic seizures. The usual quantity of blood that is taken away on these occasions would seem to be far short of that which may be borne without at all endangering the extinction of life, and much too small to induce the salutary depletion of the vascular system which the proposed remedy is intended to accomplish.

In addition to the three instances of the successful result of extensive bleedings in apoplectic attacks already cited, it may not be inapplicable to adduce a somewhat analogous case, that some time since occurred in my practice. A person of a sanguineous temperament, and accustomed to rather an intemperate mode of living, was suddenly seized with an oppression of the brain, by which consciousness and power of voluntary motion were nearly suspended. Bleeding had been repeatedly undergone previously to my being consulted, which, as well as my recollection serves me, was on the second day of the disease. In my judgment, farther bleeding was required; and, at my suggestion, the temporal artery was opened for that purpose. The blood flowed freely, and was drawn to the extent of about eighteen ounces. No discoverable relief however was derived, either from this or the former bleedings, until, in the course of the ensuing night after the arterial bleeding, the incised temporal artery spontaneously bled afresh, and so copiously, as probably to have induced a state of arterial inaction that restrained farther effusion. The quantity of blood lost on this occasion, judging from the appearance of the patient's body and bed-linen, must have been very large. It was however speedily followed by a return of natural consciousness, reason, speech, and power of voluntary motion, which soon terminated in complete recovery. The medical practitioner, who closely attended this case, and witnessed the occurrence stated, had no hesitation in ascribing the recovery to the very large quantity of blood which had thus accidentally escaped.

In farther support of the opinion that much larger, or rather more persevering, bleedings are necessary in affections of the brain than are commonly practised, a very late instance may be stated, of an injured brain from external violence, in which at first but little inconvenience was felt. After the lapse of a few weeks, however, symptoms of an oppressed brain were shown, by head-ach, giddiness, confused vision, and general prostration of strength. The pulse was feeble, small, and sluggish. Much inability for bodily exertion, and failure of mental energy, were experienced, altogether clearly denoting that the healthy function of the brain was considerably disordered. Bleeding and other evacuations had been carried to some extent, but had been

perhaps too cautiously limited by the feelings of the patient, which were those of extreme weakness. Conceiving that this sense of debility arose from a depressed, and not from an exhausted, state of vital power, and that the offending cause was vascular fulness of the brain, no difficulty occurred to me in directing an ample bleeding from the temporal artery. This was done with sensible relief. The pulse became more free, active, and full, after the bleeding than before; yet violent head-ach continued: it would indeed remit, and sometimes even intermit; but this abatement was soon succeeded by an exasperated recurrence of pain. In one of the painful fits, the arterial impulse on the brain was so strong as to cause a renewed bleeding from the part of the temporal artery that had been opened, from which escaped a considerable quantity of blood, and with manifest benefit. A similar accident afterwards occurred in numerous instances, and with such advantageous consequences, that the patient regarded the unclosed orifice in the artery as a salutary fontanel; and, but for the precariousness of suffering blood to flow from such an awful source of supply, would have been desirous of keeping it open. It was not however until after many unavailing endeavours, that the artery could be either closed, or so compressed, as to prevent renewed effusions of blood. These were evidently occasioned by the increased vascular action attending the head-ach; nor did the orifice heal, nor were the spontaneous bleedings restrained, until the arterial action had resumed the healthy state, and the head-ach had almost wholly subsided. It is difficult to say how much blood escaped by those casual bleedings; it could only be estimated by the discoloured linen, by the frequency of the recurrence, and the abatement of pain resulting from them. These effusions altogether formed a series of bleeding that would hardly be risked in practice, and most certainly would not have been repeated so often, and to the extent that happened on these occasions, and by which an ultimate cure was effected. The patient progressively amended, is now well; and it may be fairly presumed, that the restoration of health is chiefly attributable to the large and seasonable flow of blood which was accidentally yielded by the unclosed opening in the temporal artery.

These two instances of renewed bleeding from the temporal artery having afforded such decided and effectual relief, are strong facts, and deserve, in conjunction with other reasonable authorities for free bleeding in apoplectic and other cases of oppressed brain, to have due weight in determining not only the general expediency of the practice on such occasions, but also how far it ought to be carried, to insure the salutary efficiency that it may be capable of producing.

Taunton; June 12th, 1819.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Two Cases of Petechiæ; one apparently Idiopathic, the other occurring in Typhous Fever. By JOSEPH ROGERSON, Member of the Royal College of Surgeons, London.

CASE I.—Mary Hopwood, ætat. 9 years, of a delicate constitution, spare habit, fair complexion, large blue eyes with dilated pupil, for the last two years has scarcely ever been well: the least exposure to cold, or irregularity in diet, brought on slight pulmonary affections. During the last few days she has frequently complained of languidness, with sickness at stomach; but the complaints were so slight as to be considered undeserving of notice: indeed, they were rather looked upon as favourable omens; for an habitual cough, which had troubled her from infancy, entirely ceased on the supervention of these symptoms. She rose this morning (Feb. 17) apparently in as good health as on the preceding day. In dressing, a few spots were observed upon her body, which, to use the expression of her friends, so nearly resembled flea-bites, that no further notice was at that time taken of them. In the course of the day these maculæ became more numerous, the breast and neck being most affected. When going to bed she was seized with a fit of vomiting, and threw up a considerable quantity of chocolate-coloured fluid, mixed with some clotted and some fluid blood. This recurred several times during the night; but the matter ejected had not the same colour, assuming a more florid red, not unlike arterial blood. In the morning the petechiæ were scattered over various parts of the body; and in the forenoon a further eruption appeared, accompanied with hæmorrhage from the nose, to such an extent as to induce fainting. During the last few hours, she altered so rapidly, and the symptoms increased with so much violence, that her friends became alarmed, and desired I would see her. This was early in the afternoon; but was not able to visit her before evening, when I found her recovering from a violent attack of vomiting, and blood was then slowly distilling from each nostril.

On examining her body, I found the petechiæ most numerous on the head, abdomen, and neck; the latter part they completely encircled. On the face they formed clusters of different sizes; on the hairy scalp there were a few, and these were larger than on any other part. On the thighs and arms they were also rather numerous; but, below the knees and elbows, very few. On the posterior parts of the body scarcely any were discernible, except a few across the loins, and three or four on the nates. They were of various magnitude, the largest not equal to that of a sixpence. Their colour was a light red, not at all resembling the dark purplish brown we sometimes meet with

in the last stage of typhus. On passing the hand over their surface, some were prominent, others not in the least elevated.

She complains of severe pain across the forehead, general languor, oppression at stomach, with inclination to be sick; thirst not very considerable; tongue of a light flesh-colour; appetite not much impaired; skin hot and dry; bowels constipated; pulse upwards of 100 in the minute, full and intermitting. She was in a small close room; out of which I directed her to be removed into one where a constant ventilation could be kept up, by a current of air constantly entering from the window and door; to abstain from all solid food, and to drink, as her common beverage, barley-water acidulated with lemon-juice; and gave her ij grains of hyd. submuriat. with iij grains of pulv. antimon. to be taken every two hours; also a saline draught, containing eight drops of tinct. digitalis.

The following morning (February 18th) I found her much worse. She had passed a very restless night; the vomiting blood has been frequent; breathing is short and hurried; thirst immoderate; pulse scarcely perceptible; skin hot and dry, and conveys a peculiar stinging sensation to the touch; pupil insensible to the stimulus of light, neither contracting nor dilating on the approach of a candle; starts in her sleep, frequently tossing about her arms, and, when raised by an apparently unnatural effort, they are suffered to fall by their own gravity in any position; at the same time talking incoherently; and then sinks for a time into a kind of stupor, from which she is roused with difficulty; then answers questions put to her correctly, but in a rapid and petulant manner. Whenever she attempts to swallow, she complains of a sense of suffocation; in consequence of which only four doses of the medicine had been administered: the two latter were immediately rejected. The number of petechiæ are increased, especially on the back and arms. On inspecting the mouth, the tongue was covered with a dark-brown fur, its apex and sides were studded with petechiæ; also several large and distinct ones on the palatum molle, and as far down the throat as could be seen. Bowels had not been moved: I therefore requested an enema to be injected immediately, the powders to be given every hour, and the body frequently sponged with cold vinegar and water. The stomach being in so very irritable a state, I desisted from the use of foxglove, and desired nothing might be given which could be avoided. I left my patient, fully persuaded in my own mind she could not survive many hours; she being indeed then, to all appearances, *in articulo mortis*, and desired her friends would let me know immediately on this event taking place.

19*th.*—Contrary to my expectation, this morning I found the little patient much improved. The glyster had not been given,

but the powders had operated copiously upon the stomach and bowels: an evacuation was procured by taking two doses of the medicine, and this action had been constantly kept up by their punctual administration; for the relief was so immediate, that even her attendants were convinced of their utility, and this induced them steadily to persist in the prescribed means. At first, the stools were in appearance not unlike the matter first ejected by vomiting, and very offensive: their colour gradually became redder, and the fætor has entirely subsided; still however they are tinged with blood. Oppression at stomach much relieved; vomiting ceased. Bleeding from the nose continues to recur, but at much longer intervals; breathing free; pulse 90, firm and regular. A little moisture has begun to appear upon the skin within the last hour, but the peculiar stinging sensation still continues. Tongue much the same as yesterday; thirst unabated; petechiæ unaltered, except upon the breast some appear shrivelled. She is quite cheerful, and expresses herself free from pain, but excessively weak. The cold ablution is so grateful to her she asks for its continuance; I therefore directed it to be used *ad libitum*, and that she should take the medicine only every four hours.

20th.—Has slept several hours very comfortably, and is in every respect much better. Thirst abated; pulse 90; head-ach removed; no return of sickness; bowels purged, stools slightly tinged with blood. Appearances were so favourable, that the cold washing was restricted to three or four times in the day, and to take a powder only every two or three hours. She expressed a wish for animal food, and was indulged with a small quantity without any unpleasant effect. In consequence of her living at a considerable distance in the country, I did not consider it necessary to see her any more: her friends therefore promised to bring me daily intelligence of the state of her health.

24th.—Up to this time my notes contain no other information, than she continues to improve. On this day they report her comparatively well; appetite good; no thirst; petechiæ almost disappeared, a few only remaining on the thighs and abdomen; sleeps well; no sickness; the saliva is slightly tinged with blood, owing in all probability to their still existing some maculæ within the mouth. Cold bathing has been discontinued for two days; but she persists in taking one of the calomel powders three times in the day, by which means several evacuations are daily procured; and, so great is the relief they afford, she invariably expresses herself "made better," and begs for a fresh supply. No other medicine was given, and the girl is now perfectly well.

In denominating this a case of petechiæ, I am aware that

objections may be urged against it, from the opinion that petechiæ can only result from a general deranged action of the vascular system; and that the previous symptoms had not evinced such a state of the sensorium, as sufficiently accounted for that derangement. Though the previous indisposition was too trivial to engage the attention of her friends, I cannot positively assert it did not amount to febrile excitement; but I am not disposed to consider the action sufficiently violent, or long enough continued, to induce that debilitated state of constitution which must ensue, before the eruption, from that cause, could take place. On the 17th, febrile symptoms increased with the fresh appearance of petechiæ; and, in proportion as these maculæ became more numerous on the two succeeding days, constitutional derangement was aggravated. Hence I am induced to believe, that, in this instance, the febrile symptoms were rather an effect than a cause of the petechial eruption. This is an opinion I am not anxious to contend for on account of its novelty, but because the inferences deducible from this view of the subject will lead us to correct treatment, and enable us to arrest the progress of a complaint which heretofore has most generally terminated fatally; for, whether the action be spontaneous and induce the disease, or the disease primarily exists and excites the febrile affection, the proper line of conduct is evidently to diminish vascular action; but, according to the relative proportion in which action and debility are combined, may we be more or less energetic in the measures employed for this purpose.

Whilst pursuing my professional studies, I had an opportunity of seeing several cases of petechiæ *sine febre*, where the usual remedies were employed. Some of them terminated fatally; and in those which recovered, under a liberal use of the mineral acids, the pulse was invariably reduced below the healthy standard, both in frequency and strength. This made me determine to practise more decidedly, should another case come under my care. Conscious that, in the present instance, prompt and decisive measures were necessary, I adopted the plan recited; but omitted the foxglove on the 18th, owing to the irritable state of stomach, which I supposed it contributed to keep up. I was strongly tempted to employ the lancet; but, a slave to preconceived opinions, and apprehensive of the fatal consequences which I feared would follow its use, I had not resolution enough to call in its aid. From the favourable termination of this case under the means instituted, we are warranted in concluding they were beneficial; and I am disposed to think, had more active doses of purgative medicine been given, so as to produce an early effect on the bowels, it would have prevented the state in which my patient was the following day.

It is highly probable, more immediate relief would have been obtained by blood-letting; but this is a practice, the efficacy of which remains to be fully ascertained, and can only be done by repeated trials; for since, in the absence of facts, abstract reasoning is at least questionable, we must wait until public experience either sanctions or condemns a remedy, which, if used with discrimination, promises fair to alleviate the sufferings of mankind.

The fatality most commonly attending these cases, induced me to communicate one, where the advantages of the practice detailed was obvious, without waiting perhaps a number of years to accumulate facts enough to decide on the propriety of such practice in general. If practitioners who have had opportunities of treating this complaint, would impart the result of their experience, the question would soon be set at rest.

Case II.—Thomas Waring, ætat. 15, living in a crowded part of the town inhabited principally by poor half-starved families, and from whence fever had not been absent for several months, had been ill twenty-one days before I saw him; which I was requested to do, in consequence of a copious eruption of petechiæ over the whole body. They were first perceived yesterday, upon the breast and face; to-day, they have made their appearance on other parts; and now (April 6th) no part is exempt from them. They are of a dark-purplish colour, and various sizes; none of them, however, larger than a pea.

He is quite insensible, occasionally muttering something incoherent; tongue coated with a dark-brown fur; the teeth and their interstices are likewise covered with the same matter; breath offensive; thirst excessive; bowels costive; pulse, I know not how to describe better than by saying, it conveyed to the finger a sensation similar to a continued stream of water passing through an elastic tube. He frequently applies his hands to his head, as if conscious of pain. Has voided bloody urine several times since the attack. During his illness he has taken an occasional purgative only.

I took twelve ounces of blood from his arm, when he fainted. On his recovery the pulsation of the artery could be distinctly felt beneath the finger; but it beat with so much rapidity and irregularity, it could not be counted. A powder, containing vj grains of jalap and iij of calomel, was ordered to be taken every hour; and the body directed to be frequently sponged with cold vinegar and water.

7th.—Powders have operated freely, producing many stools of a dark colour, and intolerably offensive. Pulse 120, feeble, but quite distinct; perfectly sensible, and complains of oppression at his chest, and acute wandering pains in his head; thirst very considerable; tongue same as yesterday; no evident alte-

ration in the eruption; skin not so hot and dry. He expresses himself much refreshed by the cold-bathing, which, with the medicine, was ordered to be continued as before.

8th.—Has had some comfortable sleep in the night, and perspired rather profusely. Thirst much abated; the tongue begins to assume a yellowish appearance; pulse 120; bowels continue open; stools of a light-red colour, and much less offensive; petechiæ not so numerous on the thighs and abdomen. This morning, feeling an inclination to eat, his mother indulged him with a small piece of toast, and a basin of tea: this produced great uneasiness at stomach, which was only relieved by vomiting. I prohibited his taking any more solid food. Continue medicines and the cold ablution.

9th.—Continues better. Pulse 100; tongue almost free from fur; bowels purged, and the dejections neither unnatural in colour nor smell. He complains of the medicine griping; to prevent which, I combined about 1-6th of a grain of opium with each powder, and desired him to take one every three hours. Thirst almost gone; petechiæ begin rapidly to decrease in number, especially upon the upper and lower extremities.

10th.—Considerably better; has slept the whole of last night. The medicine procured four evacuations from the bowels; griping ceased; pulse below 100; no thirst; skin cool; has eaten some bread and milk, without producing any uneasiness. A few petechiæ remain on the breast, back, and abdomen; all the others have entirely disappeared. The cold affusion was only used twice yesterday.

11th, 12th, 13th, and *14th.*—Continues to improve; petechiæ entirely disappeared. The medicine was persisted in, until today, the quantity having been gradually diminished. Appetite is now very good, and the only symptom to contend against is debility. The cold washing has been discontinued for two days. He now takes freely of animal food, and is allowed a pint of porter daily.

From this time his convalescence was rapid; in a few days he was able to take exercise out of doors, and is now perfectly well.

The exceeding prevalence of the late epidemic fever has fully proved the utility of blood-letting, and other depletory measures, in its early stage; whilst it has afforded innumerable facts corroborative of Dr. Clutterbuck's theory, and established the propriety of the treatment instituted by him, and other eminent medical characters. It has also tended in no small degree to dispel the mists of prejudice which have so long enveloped the minds of medical men, and thus prevented its being brought into general use. Its advocates have only now to fear it will be brought into disrepute, by incautious and ill-timed application,

Although ts efficacy is admitted by most in the beginning of fever, there are few who would subscribe to its employment in the latter stage; nor should I wish to be understood as advocating the use of the lancet in every case; for I am well aware, that a rash and indiscriminate perseverance, would be a more dangerous practice than refraining from it altogether.

In cases, however, where we have a train of symptoms to contend against, arising from excessive circulation in some important organ, which, if not speedily removed, would soon terminate fatally, and where few would hesitate to pronounce purgatives were the only medicines from which we could expect success, because their efficacy consists in the depletory effects they produce, removing irritation, and equalizing the distribution of blood; is it not better immediately to effect our purpose by the abstraction of blood, rather than wait the more tardy operation of medicine, which could achieve only the same end, and cause a delay by which we might lose our patient?

In this case, I should consider petechial effusion (if I may so term it) as a consequence of increased vascular action in a constitution already debilitated by disease; for, the greater the debility, the less increase of action will be necessary to produce this effect; and this exhausted state of constitution might be urged against adopting a measure which would tend still further to weaken our patient. To this I would reply, the loss of a small quantity of blood, sufficient to produce the desired effect, would not bring on prostration of strength adequate to what would ensue from a continuance of the disease.

Appearances in Waring's case were so unfavourable, I was apprehensive lest, in waiting the operation of purgatives, the complaint would increase, and my patient shortly be in a state over which human means could have no control: it is in similar instances, and as a remedy which ought never to be lost sight of, I would recommend blood-letting. The good effects of this practice were immediately evident, and certainly such as to warrant a repetition. In the more advanced stages of fever, when the lancet was not admissible, I have seen much benefit derived from topical bleeding with leeches.

It is not the least remarkable of the phenomena of fever, to what a considerable extent active depletory measures may be carried, even in poor half-famished families, (among whom the complaint has principally prevailed in this town,) and yet produce so little subsequent debility. If the patient has applied early in the disease, its progress has generally been arrested by brisk purging with calomel and jalap, or a solution of neutral salts in an infusion of senna, and ipecacuanha wine, the action of the bowels being kept up without intermission for three or four days; at the end of which time all complaint has ceased,

and the person has generally been able to return to his usual occupation, expressing himself stronger than before his illness. If the complaint has existed for some time before application is made for relief, the period of convalescence has commonly been long and protracted.

Wigan; July 9th, 1819.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Two Cases of Genital Mal-formation. Related by GEORGE HUME WETHERHEAD, M.D.

COMPLYING with your request, to put on paper a description of the cases of genital mal-formation, the particulars of which I casually mentioned to you, I commence with observing, that it formed part of my duty, when belonging to the flag-ship of Sir Richard Bickerton, at Spithead, to examine all seamen who were either drafted from the other ships of the fleet or impressed from the shore, to see that they were not disabled by rupture or otherwise. It was in the course of this duty that the two cases alluded to occurred.

The first was that of a seaman, sent on-board from H. M. S. Halifax. He was a slender-made young man, apparently about 18 or 19, but several years older by his own account; with small features, mild and feeble voice, fair complexion, and blue eyes: his neck was long and slender, his chest narrow and flat, and the mammæ were not at all protuberant; the upper and lower extremities were slim, and his fingers tapering. As he stood upright, his sexual developments seemed those of a woman: the mons veneris was very prominent, and distinct labia protruded from beneath; but, on closer inspection, a scrotum containing two small testes appeared, which the proximity of his thighs had concealed: this, too, was favoured by its situation being more retired than usual, seeing it was not borne forwards by a penis; in place of which, on separating the labia, a small clitoris, about half an inch in length, came into view, the glans of which had what seemed a meatus urinarius; but, on enquiry, I found that his urine did not pass by this orifice, but through three small apertures in a membrane occupying the site of the hymen, on each side of which the limbs of the scrotum (if I may so call them) commenced. I introduced a probe into the meatus of the clitoris, which proved a false passage, terminating under the skin behind the frænum. The apertures through which the urine flowed, were so placed as to resemble the position of the three angles of a triangle, and these so trifurcated the stream of urine, as obliged him to crouch down, as women do, when he passed it.

He affirmed that he had no sexual desires, and that the clitoris was incapable of erection. I got Dr. Denmark to see this example of deficient organization.

The second case was that of a tall robust young man, who had been just impressed, the peculiarity of whose conformation consisted in the absence of all vestiges of scrotum or testes. The penis was proportioned to his apparent manhood; but the skin descending thence was quite smooth and tense, and not a ruga of scrotum was to be perceived. The young man said that he was born so. No testis was to be felt in either groin; and he declared, what, from his athletic appearance, I was much inclined to doubt, that he had never experienced any amorous inclinations.

18, Upper Montague-street, Montague-square; 29th July, 1819.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Observations on Animal Heat; in Reply to the Queries of ÆMILIUS, *in this Journal for March last.* By JOHN DOWN, Esq.

IT was discovered by Dr. Crawford, and published in 1781 in his Experiments and Enquiries into the Cause of Animal Heat, that, if an animal was immersed in a medium hotter than the temperature of its body, the blood would return to the right side of the heart, nearly in the same state or colour as it was sent from the left side. Since this time, I believe, no rational theory has been advanced to account for this phenomenon. My enquiries were instituted for the same purpose, although my experiments at this time are incomplete; therefore, in venturing my opinion upon the above queries, I shall not warrant their correctness: but, as this seems a chasm in physiology, and so closely connected with ÆMILIUS's enquiries, that I cannot give a rational reply to them without entering upon the subject of animal heat, I shall state the outlines and deductions drawn from them; and, should they be incorrect, I trust that some of your numerous readers will state their objections, and bring the matter in question fairly before the public. I cannot trespass upon the pages of your Journal to give my experiments in detail, but shall content myself with my general observations upon them. The florid red colour of the blood is acquired in its passage through the lungs, where it changes from venous to arterial. This, I think, is agreed upon by all physiologists; therefore this will be taken for an established fact.

It has also been proved, that the two most important parts of our atmosphere are oxygen and azote, and one part of this is absorbed by the blood in its passage through the lungs, namely,

oxygen; and this absorption converts the venous to arterial blood. This is the florid-red blood spoken of by Æmilius. It might be asked, why should not the blood at the right side of the heart be the same colour as that of the left? (what I mean by this question is this, why should the blood be carbonized, or converted from arterial to that of venous?) However, we know from experience, that the blood undergoes a change in passing from the left to the right side of the heart, equally as great as it does in passing from the right to the left side, through the tissue of the lungs. I must first account for this, and afterwards endeavour to answer the question.

In the first place, I shall enquire what happens in the lungs in the ordinary mode of respiration, in as few words, to be understood, as possible. The blood passes from the right to the left side of the heart through the tissue of the lungs, and is here exposed to a surface of air far more extensive than the whole body. The blood here absorbs a part of the oxygen of respiration from the atmosphere, but the quantity has always appeared to me to vary according to circumstances; and, in all my experiments, before I formed any theory, my attention was arrested by a sensible difference in the consumption of air, from a cold to that of a warm atmosphere: therefore, the quantity consumed depends upon many circumstances, but particularly on that of the temperature of the medium surrounding the body. When my body has been exposed to a temperature below that of the freezing-point, the consumption of air in the lungs has been from sixteen to twenty ounces, by measure, in one minute: on the contrary, when I have entered a room heated by a stove, where the thermometer stood at 170, the consumption of air was comparatively small, and in some instances I could not discover any waste to have taken place in the confined quantity of air breathed: therefore, the inference drawn by me is, that a healthy subject consumes more oxygen in a cold atmosphere than he does in a hot one; and this coincides with the opinions of those who consider animal heat to be kept up by respiration. No theory, that I know of, has been given to the public, more rational than that of Dr. Crawford's, before alluded to, upon the subject of animal heat. I never could procure a reading of this work except by garbled extracts, but it does not appear altogether unobjectionable; for he does not, I believe, positively make out the exact mode in which it is generated. I think this is his theory: "That the blood, in its passage through the lungs, absorbs the latent heat of the atmosphere, and is given off afterwards in circulating through the body." But this theory has of late been attacked as fallacious, owing to some excellent experiments conducted by Mr. Brodie, by keeping up the circulation of blood by means

of artificial respiration. The blood, in this case, seemed to be duly oxygenated; yet the heat of the animal sunk faster than that of another, killed at the same time and under the same circumstances, but left to cool of itself. He also proved by these experiments, that the functions of the animal economy once stopped, though the circulation be kept up by artificial respiration, secretion appeared entirely to cease, and the blood returned to the right side of the heart nearly in the same state of *oxygenation* as it was when it escaped from the left. What really appears to take place in the lungs of a living animal, is this: that the blood, as it passes through this organ in the ordinary mode of respiration, absorbs a vast quantity of oxygen, either to oxygenate the blood or to decarbonize it, or probably both. I shall not here dispute this point; but, as a waste of air indisputably does take place, (and we will say, for instance, eight ounces by measure in one minute,) if this eight-ounce measure of oxygen gas be condensed into the blood, or absorbed, *one of two things must of necessity take place;* that is, the blood must be increased in *temperature* or in *quantity:* it must therefore either be lighter or hotter than it was before it passed through this organ. It is well known that the blood in the lungs is no hotter than it is in other parts of the body; and Mr. Coleman, in his experiments, has stated the blood to be somewhat colder in the left side of the heart than it is in the right. As the blood is no hotter in the lungs or the left side of the heart than it is in other parts of the body, it must, as before observed, be increased in quantity; that is to say, the blood, when oxygenated, takes more space than it did in a venous or carbonous state, and, consequently, the arterial blood is of less specific gravity than that of the venous; and this I believe to be understood by most physiologists.

If these premises be correct, (and they have in part originated from experiments by myself and others,) it will not be a very difficult task to state the manner in which animal heat is generated and given to the system. The functions of the heart and arteries are, to send and convey the blood to all parts of the body, for the growth, nutrition, and secretion of the glands. All the capillary vessels and glands, the liver excepted, that perform the function of secretion, receive their respective fluids through the medium of the arteries. We will bear in mind this to be the florid-red blood spoken of before, which has been rarefied or expanded in the lungs. The function of the glands depends upon two principal things in the animal economy; that is, their being duly supplied with a proper fluid to perform their secretions, and the nervous stimulus to put these glands and capillaries into action. What this nervous stimulus is, physio-

logists have not explained, although, in the absence of facts, we have abundant conjectures; but such is the state of things, that the glands do not perform their functions unless stimulated by the nerves. In the absence of this stimulus, the blood may therefore circulate through the body without giving off any heat to the system, as was the case in Mr. Brodie's experiments; but he observed the blood returned to the heart nearly the same colour as it left, and at the same time proved that the glands did not perform their functions by secreting their respective fluids.

From these experiments and observations it will appear, that the glands and capillary vessels, in performing their functions of secretion, change the arterial to that of venous blood; and the lungs change that of venous to arterial. We may therefore recapitulate all that has been said in a few words, respecting the subject of animal heat: That the blood, in its passage through the lungs, absorbs a quantity of oxygen gas, and hence it is *rarefied* or *expanded;* when this expansion has taken place, the blood passes on to the arteries, and is conveyed to the glands and capillary vessels; these are brought into action by the nerves, secrete their respective fluids, change and *condense* the blood from arterial to that of venous, and give off the heat to the system. I therefore shall not call this latent heat, but heat by condensation. This axiom of condensation giving out heat is so well understood by chemical philosophers, that I need not enter into any explanation: however, all medical men may not be chemical philosophers; I shall therefore mention one fact familiar to all: Mix equal parts of sulphuric acid and water together, the temperature will be increased to the boiling point. The two fluids mixed together move in and fill a less space than they did in a separate state; therefore, their specific gravity is increased, and heat given off by condensation.

Leicester; May 14, 1819.

P.S. ÆMILIUS's questions are not wholly answered; nor could I, without entering upon the subject, why animals, with a double circulation, should be capable of resisting the heat of 212, or more, with little inconvenience, and without suffering their temperature to be raised much above that of the regular heat of their bodies. My paper already has grown too long to enter upon this subject; but I shall, in some future number of your Journal, communicate the result of my experiments and enquiries upon this subject.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Observations on the Utility of Hedera Sylvestris (Ground-Ivy) in the Treatment of Mania. By E. SUTLIFFE, Esq.

THE medical qualities of ground-ivy are not, I believe, sufficiently known to the medical profession, (for it is not admitted into our Pharmacopœia.) I have employed it for more than twenty years in cases of mental aberration, especially in melancholia, with the most advantageous results, and am disposed to think that it is a highly valuable remedy. It appears to act as a direct sedative. When its operation is salutary, it tranquillizes the patient; and when no organic disease is present, and the affection seems to depend on a casual cause of excitement, I am not often disappointed in my expectations of a favourable termination of the malady under its use.

The mode in which I have generally directed it to be employed, is a wine-glass full of the liquid juice twice or thrice a-day, but in some cases this cannot be exhibited; I have then ordered a proportionate quantity of the extract: but my observations have not led me to repose so full a degree of confidence in the latter as in the former preparation of the plant.

In cases of mania, where the high arterial excitement requires *local reduction*, I have found it, conjoined with abstraction of blood, generally lead the disease to a favourable issue. In some cases it has, however, not been productive of any benefit: in these, I suspect, there has been present some organic disease.

My object in making the preceding brief observations, is to draw the attention of other practitioners to this remedy, and to extend the benefits that may be derived from it beyond the circle of my own personal avocation.

Queen-street, Cheapside; July 8th, 1819.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Remarks on Dr. Porter's Doctrine respecting Hydrocephalus. By D. HENDERSON, Esq.

MR. SUTLIFFE presents us with a case of phrenitis in your Journal of last month, which he very properly combats, and happily subdues, by the application of leeches to the temples, aided by the free use of calomel and antimonial powder. But it is evident, from his own statement, that he considered it a case of hydrocephalus acutus; and for that reason he avows himself desirous to show that "the peculiar stress laid upon topical applications to the base of the cranium and nape of the

neck, by Dr. Porter of Bristol," may be successfully dispensed with.

The author, whose practical instructions Mr. Sutliffe would subvert by the exhibition of his case with its result, has taken great pains to point out the distinctive marks of meningeal and of encephalic inflammatory condition. The case under consideration is a pure instance of the former, "pyrexia vehemens; dolor capitis; rubor facei; et occulorum lucis et soni intollerantia:" it does not present one feature of genuine acute hydrocephalus; and therefore, what is set forth in opposition to the practice recommended by Dr. Porter, rather serves as illustrative of the excellency of that physician's doctrine and practice. In phrenitis, abstract blood from the temples; in hydrocephalus acutus, from the nape. In the former all the branches of the external carotids are engaged; in the latter the seat of inflammation is the posterior, and most frequently to the exclusion of all phrenitic symptoms. But the diseases are sometimes mixed; then let the mode of attack be mixed. His pathology leads to these conclusions; and his distinctions are so far valuable, that they are not only theoretically right, but practically useful.

Mr. Sutliffe has shown his zeal for the advancement of practical knowledge by the publication of his case; and I hope these observations, which I feel due to the doctrine he would attack, may only serve to add a little reflection to any fact he may in future think worthy of public attention.

Bristol; August 3, 1819.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

An Enquiry relative to BORDEU'S *Hypothesis of the Origin of the Buffy Coat on the Blood.* By MONSPELIENSIS.

THE prevalent notions respecting the origin of the buffy coat formed on blood drawn from a vein in some diseases, being various and unsatisfactory; and, as a correct knowledge of the nature of this phenomenon would probably lead to very important and beneficial inferences applicable to the practice of medicine; I am led to believe that you will not be averse to the devoting of a few of the pages of your Journal to the investigation of this subject. At present, I merely offer for insertion the hypothesis of Bordeu, which appears to me to merit a greater degree of attention than has hitherto been conferred on it; but, as I may have overlooked some general objection to it, I solicit, through the medium of your Journal, information of such objection, or other remarks respecting it, as may be discerned by any physiologists who may be disposed

to concur with me in promoting the investigation I here propose. I therefore defer, for a short time, the advancing of the observations I have to make relative to the hypothesis of Bordeu.

"The sizy fluid which abounds in the blood in several acute and chronic diseases, has long appeared to me," says Bordeu,* "to be a species of plethora, of superabundance, or of cachexy, which I term mucous. It is the result of a return into the blood of the nutritious matter detached by disease from the parts where it was about to become intimately united with the cellular tissue. I have regarded this superabundant sizy fluid as the primary matter of depositions, that of pus, and that of what are termed coctions. We find this matter during critical, and even symptomatic, evacuations; sometimes in the urine, sometimes in the sputa, sometimes in the depositions, and in metastases. We know, when it does not show itself in the excretions at the periods marked for its appearance in acute diseases, that these diseases then become chronic. There are also occasions in which this sizy fluid, far from being superabundant and forming a plethora, is not found in the appropriate proportion; and it is this which establishes a sort of dissolution of the blood, of which I shall hereafter treat."

And, in his *Recherches sur les Maladies Chroniques*, theor. xxx. he says,

"The cellular organ, or mucous tissue, is, then, the seat of inflammation, and the cause of the tumefaction that accompanies it; for it is rare that tumours are formed in parts simply membranous, in which there is no cellular tissue. The cellular organ also furnishes a mucous or gelatinous matter, proper for the formation and the increase of callosities. This matter (originally the mucilaginous part of aliments) is the nutritious fluid which has not yet been converted into laminæ, and which, in many diseases abounds in the blood, not yet being able to be received into the cellular tissue; as the bile abounds in it when not separated by the liver. We observe on this subject, that, as inflammation of the liver does not always produce jaundice, so every affection of the skin, or of the cellular tissue, does not engender a plethora of the nutritious fluid; because a sufficient reflux of it into the blood does not take place. The gelatinous or nutritious fluid, by reason of its superabundance and the facility with which it concretes, is also the cause of the buffy coat, or pellicle, which floats on the blood drawn from a vein; which pellicle is more or less thick and firm, according to the length of time that the blood reposes in the cup. These pellicles are improperly attributed to the heat attending fever,

* *Analyse Medicinale du Sang*, § xxxi.

which is never sufficiently powerful to produce concretion. It is not with more propriety attributed to a morbific humour which often does not exist; for example, in an inflammation occasioned by a ligature made on a part, when the system is in a state of health. There is, then, in almost all diseases a plethora of the nutritious fluid; and the concretions which are formed on the surface of the blood in acute and chronic affections, are nothing else than this same fluid, which has not been permitted to be lodged in the cellular tissue. This nutritious fluid is also the cause of the whiteness of the blood drawn from nurses; a whiteness which has imposed on some physicians, who consider it, especially if there be fever, as the product of a corrupt humour. Lastly, as the milk sometimes reflows from the breasts into the blood, so does the nutritious fluid in the same manner: that is the reason why the blood of some pregnant women has been found of the colour of milk."

In another place (theor. lxxxiv. *op. cit.*) he says,

"It is not rare, in acute and chronic diseases, to see evacuated, at the time of crisis, a great quantity of mucous fluid with the urine. When separated from the urine, it resembles the white of an egg, both in its consistence and the property it has of becoming thickened by fire. I have given it to a dog, who ate it with avidity, as if his instinct had made him discern in it the true matter for nutrition. This matter is, then, the nutritious fluid, which has undergone a little change. I have seen it abound in some patients, and appear in all their excretions. Although in these persons the stomach has executed its functions very well, yet the state of constriction (serrement, *want of expansion,*) and dryness in which their cellular tissue has been, has rendered the circulation and the application of the nutritious fluid impossible. From this it happens that they fall so rapidly into a state of extreme emaciation, and that the blood drawn from them in the access of fever hardly ever fails to show us the buffy coat or mucous pellicle, even though the plethora of the nutritious fluid, from a reflux of it into the blood, has not been present."

In order to render the above passages fully intelligible to those not conversant with the writings of Borden, I shall observe that, by the *cellular tissue*, Bordeu designates the basis or elementary structure of all the organs of the body. This he has fully developed in his *Recherches sur le Tissu Muqueux;* a dissertation which served as a basis and model to Bichât for the most valuable part of his works, his *Traité des Membranes.*

London; July 26, 1819.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

Relating to the History or the Art of Medicine, and the Auxiliary Sciences.

Floriferis ut apes in saltibus omnia libant,
Omnia nos itidem depascimur aurea dicta.

Remarks on what takes place in some Animals relative to the Excretion of Milk.

[Bordeu, *Rechérches sur les Glandes,* § lxxiv.]

THOSE who have often witnessed the milking of cows, or who have had the curiosity to attempt effecting it themselves, must have perceived, that, as the peasants express it, *every body has not a good hand for it.*

Any rude compression of the teat will not do; it should be gently titillated and elongated; we then see the cow fix herself in her position, extend her thighs a little, and then the milk flows in abundance. If compression or extension of the teat were only necessary, everybody could milk an animal.

It often happens that a person who knows very well how to milk cannot get milk from certain cows. Some are delicate in this respect, others are trickish: the former can only give their milk to certain persons; the latter will only do so to those that excite them in a certain manner. They commonly habituate themselves to those who have been accustomed to milk them; and it is often useless for strangers to attempt to effect it.

We sometimes see peasants menace, and even beat, their ewes, cows, and goats, until they choose, as they say, to give their milk; of which they are sometimes very avaricious. Some will only give it when they are amused by having something to eat set before them; others would never give it if their attention were thus distracted: there are in this respect many variations.

What happens with respect to their sucklings, also merits attention. It is known that they seize the teat, and that they elongate it, by pressing it in a sort of canal which they form with their tongue; they suck thus, and labour some time without being able to get any milk, which comes at length when the mother places herself in a certain posture: if she walks about, or if she amuses herself, the suckling does not get much; it is necessary that the mother be occupied by what regards her young one.

When the mother does not give her milk properly, what is it that the young one does? We see it assume a variety of motions; it shakes the teat, and presses it towards the contiguous parts: these agi-

tations make the milk flow, not because they compress the udder, but because they excite it, and put it into action.

A suckling which displeases its mother, as sometimes happens, or a stranger, that the mother will recognize by the rude efforts he makes, and the irritations he excites, will try in vain; he will not get a drop of milk; the mother preserves it for her favourite.

We have been assured by peasants, that there have been vicious cows, which would neither give any milk to their sucklings, nor to those persons who tried to milk them, and which nevertheless appeared to be well adapted for the having of milk. On watching them during the night, it has been seen that serpents came and hung by their teats, and sucked them, which the cows suffered with so much pleasure, that they showed their passion by continued lowings. It is a received opinion amongst the Pyrennees, that serpents have the talent of titillating, the cows to such a degree, that, when they have been sucked by these animals, they will not suffer either their sucklings or the peasants to milk them.

There are women who assume an affection for certain children; there are also amongst brute animals some mothers who only take pleasure from certain sucklings: this is commonly their own, as we have already observed, or that to which they have been habituated. But some have been seen to form an attachment to young animals, which they would have fled from, or devoured, if they had not been retained by the delight of the titillation they have endured. Bitches, the most eager after game, have been known to suckle rabbits and squirrels, as well as young wild hogs and wolves, which certainly possessed their natural ferocity; since animals of the same species with the mother who nourished them, have fled from them with terror, or pursued them with rage.

There are some young animals, which, not knowing how to suck, disgust their mothers, whom the peasants are obliged to render favourable to them, by accustoming their teats to the sensation which the suckling, not having the talent to flatter the mother, excites; for the mother will only nourish it on the condition that she shall herself have her share of pleasure.

To these remarks we should add, that, with respect to women, as well as to cows, goats, &c. those which have the largest mammæ are not those which give the most milk. They should be sensible in proportion as they are large, without which they become flabby or loaded with fat: they should also be disposed to enter into contraction, and to take on that action which elicits the milk and causes it to flow.

It must not be forgotten, that, if a mother be not for a certain length of time excited by her suckling, the breasts forget their proper function; they subside, and become indolent, and without action. There are some, however, which can recover it by simple suction; the breasts then awake from their state of drowsiness.

Precocious girls have sometimes been seen, who, having habitually suffered themselves to be sucked, have had milk formed in their breasts; but we know that the breasts commonly only dispose them-

selves to their functions in consequence of pregnancy. Although it may have happened that men have had milk, as it has been stated, and that this milk has been different from a species of serous fluid with which the breasts of young persons are more or less filled towards the age of puberty, we may dispense with the enquiry after the cause of this rare phenomenon.

Are not these reflections, then, which might be carried to a much greater length, as it would be difficult to explain all the phenomenon relating to this subject; are they not sufficient to authorize the assertion, that the excretion of milk depends, at least in part, as we have already said, on the particular erection of the breasts themselves?

COLLECTION OF RARE AND INTERESTING CASES.

[*Continued from page* 116.]

Polyphagism.—All the polyphagists whose wonderful deeds are recorded in history, are superseded by the famous Tarrare, who was known to all Paris, and who died at Versailles about twenty years since, at the age of twenty-six years.

M. le Baron Percy, who saw Tarrare, and who made some investigations respecting this singular personage, has given us the history of him, in a very curious memoir on Polyphagy: it is from this memoir that I shall extract the particulars I am about to relate of Tarrare. Tarrare has renewed amongst us the fable of Erisichton, who, according to Ovid, devoured at one meal what might have sufficed for a whole city, or a whole nation.

——quod urbibus esse,
Quodque satis poterat populo.

At seventeen years of age, Tarrare weighed only one hundred pounds, and was already able to eat, in twenty-four hours, a quarter of a bullock of that weight. Having left his parents when very young, (he was of the environs of Lyons,) sometimes begging, sometimes stealing, to obtain subsistence, he attached himself to one of the shows on our boulevards, where we see exhibit themselves, in turn, Gill, Harlequin, and Punchinello. One time, on the stage, he defied the public to satiate him, and ate in a few minutes a pannier-full of apples, furnished by one of the spectators; he swallowed flints, corks, and all that was presented to him. At the commencement of the war Tarrare entered into a batallion; he served all the young men in easy circumstances in the company, did all their jobs for them, and ate up the rations they left for him. Famine nevertheless gained upon him; he fell sick, and was taken to the military hospital at Soultz. On the day of his entry he received a quadruple allowance; he devoured the food refused by the other patients, and the scraps about the kitchen; but his hunger could not thus be appeased. He got into the apothecary's room, and ate there the poultices, and everything he could seize. "Let a person imagine," says M. Percy, "all that do-

mestic and wild animals, the most filthy and ravenous, are capable of devouring, and they may form some idea of the appetite, as well as of the wants, of Tarrare." He would eat dogs and cats. One day, in the presence of the chief physician of the army, Dr. LORENCE, he seized by the neck and paws a large living cat, tore open its belly with his teeth, sucked its blood, and devoured it, leaving no part of it but the bare skeleton: half an hour afterwards he threw up the hairs of the cat, just as birds of prey, and other carnivorous animals, do. Tarrare liked the flesh of serpents; he managed them familiarly, and ate alive the largest snakes *(couleuvres)* without leaving any part of them. He swallowed a large eel alive without chewing it, but we thought we perceived him crush its head between his teeth. He ate, in a few instants, the dinner prepared for fifteen German labourers: this repast was composed of four bowls of curdled milk, and two enormous hard puddings. After this the belly of Tarrare, commonly lank and wrinkled, was distended like a balloon: he went away, and slept until the next day, and was not incommoded by it. M. COMVILLE, the surgeon-major of the hospital where Tarrare then was, made him swallow a wooden case, enclosing a sheet of white paper: he voided it the following day by the anus, and the paper was uninjured. The general-in-chief had him brought before him; and, after having devoured in his presence nearly thirty pounds of raw liver and lights, Tarrare again swallowed the wooden case, in which was placed a letter to a French officer, who was a prisoner to the enemy. Tarrare set out, was taken, flogged, imprisoned; voided the wooden case, which he had retained thirty hours, and had the address to swallow it again, to conceal the knowledge of its contents from the enemy. They tried to cure him of this insatiable hunger, by the use of acids, preparations of opium, and pills of tobacco; but nothing diminished his appetite and his gluttony. He went about the slaughter-houses and bye-places, to dispute with dogs and wolves the most disgusting aliments. The servants of the hospital surprised him drinking the blood of patients who had been bled, and in the dead-room devouring the bodies. A child fourteen months old disappeared suddenly; fearful suspicions fell on Tarrare; they drove him from the hospital. M. Percy lost sight of him for four years: at the end of this time he saw Tarrare at the civil hospital at Versailles, where he was perishing in a tabid state. This disease had put a stop to his gluttonous appetite. He at length died in a state of consumption, and worn out by a purulent and fetid diarrhœa, which announced a general suppuration of the viscera of the abdominal cavity. His body, as soon as he was dead, became a prey to an horrible corruption. The entrails were putrefied, confounded together, and immersed in pus: the liver was excessively large, void of consistence, and in a putrescent state; the gall-bladder was of considerable magnitude; the stomach, in a lax state, and, having ulcerated patches dispersed about it, covered almost the whole of the abdominal region. The stench of the body was so insupportable, that M. TESSIER, chief surgeon of the hospital, could not carry his investigation to any further extent.

Tarrare was of a middle-sized stature; his habit of body was weak and slender; he was not of a ferocious spirit; his look was timid; the little hair he had preserved, although very young, was very fair, and extremely fine. His cheeks were sallow, and furrowed by long and deep wrinkles: on distending them, he could hold in them as many as a dozen eggs or apples. His mouth was very large; he had hardly any lips; he had all his teeth, the molares were much worn away, and the colour of their enamel streaked like marble; the space between the jaws, when they were fully separated, measured about four inches: in this state, with the head inclined backwards, the mouth and œsophagus formed a rectilinear canal, into which a cylinder of a foot in circumference could be introduced without touching the palate. Tarrare, says M. Percy, was constantly covered with sweat, and from his body, always burning hot, a vapour arose, sensible to the sight, and still more so to the smell. He often stank to such a degree, that he could not be endured within the distance of twenty paces. He was subject to a flux from the bowels, and his dejections were fetid beyond all conception. When he had not eaten copiously within a short time, the skin of his belly would wrap almost around his body. When he was well satiated with food, the vapour from his body increased, his cheeks and his eyes became of a vivid red; a brutal somnolence, and a sort of hebitude, came over him while he digested. He was in this state troubled with noisy belchings, and made, in moving his jaw, some motions like those of deglutition. M. Percy never saw in him any signs of rumination. The young Tarrare was almost devoid of force and of ideas. When he had eaten to a moderate extent, and his hunger only appeased, he was quick and active; he was heavy and sleepy only when he had eaten to excess.

On the Honorary Rewards of a Physician.

[From the Παραγγελίαι of HIPPOCRATES.]

WHEN you undertake the care of a patient, if you commence with settling what relates to your rewards, you will lead him to suppose that you will not abandon him in the midst of the treatment you may resort to: if you were to act otherwise, he might think that you would neglect him, or not exercise that careful and strict authority which a physician should assume. It is then of importance, in many respects, that you consider what relates to a recompense for your pains. The conduct of a true physician will, however, on all occasions, be guided by liberality and benevolence rather than by severity; and he will not act otherwise in what relates to his demands of pecuniary rewards: he will also be careful to adapt them to the abilities of individuals. He will indeed, on some occasions, attend on patients without requiring them, especially on the poor man and the stranger: he will here have in return a grateful remembrance for his benefits, and will evince his love of human nature as well as of his art.

Mr. Carmichael's *Synopsis of Venereal Diseases.*

I. PAPULAR VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The simple primary ulcer. 2. Patchy excoriation, attended with a discharge.	Astringent washes. Antimonials. Sarsaparilla.
3. Gonorrhœa virulenta,	Astringent washes. Antimonials. Terebinthinates.
4. Buboes,	Leeches. Cold applications. Blisters. Poultices.

Secondary Symptoms.	
1. Papular eruption, preceded by fever, and ending in desquamation. 2. Excoriation of the fauces. 3. Swelling of the tonsils and glands of the neck. 4. Pains in the larger joints, resembling rheumatism.	General blood letting, to be adopted when indicated by the fever, and proportioned to its degree. Antimonials. Sarsaparilla. *Mercury unnecessary in any stage, and highly injurious until the eruption desquamates, the fever is subdued, and the disorder is evidently on the wane; and then an alterative course of antimony and calomel may occasionally accelerate the cure.*
5. Iritis.	*Full mercurial affection of the system until the inflammation is subdued.* Local bleeding. Blistering.

II. PUSTULAR VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The ulcer with elevated edges, without induration.	Astringent washes. Antimonials. Sarsaparilla.
2. Buboes.	The same treatment as for the buboes in No. I. Excision of the undermined edges of the bubo.

Secondary Symptoms.	*Remedies.*
1. Eruption of pustules, in general phlyzacious, preceded by fever, and terminating in ulcers covered with thin crusts that heal from their margins, and, when the disease is on the wane, the eruption desquamates into scaly red blotches.	General blood-letting, as in No. I. Antimonials. Sarsaparilla. Guaiacum. Tar ointment. Baths of sulphurated kali. Nitro-muriatic acid baths. *Mercury is decidedly pernicious until the pustules terminate in scaly blotches instead of forming ulcers; and then mercurials, in alterative doses, conjoined with sarsaparilla or guaiacum, may occasionally be employed with benefit.*
2. Ulcers on different parts; fauces, in general of a white aphthous appearance.	The same general treatment, conjoined with the following local applications: Common detergent gargles. Oxymel Æruginis. Fumigations of factitious cinnabar.
3. Pains in the joints.	The same general treatment, conjoined with the following local applications: Leeches. Fomentations. Bread and water poultices. Blisters. Ointment of tartarised antimony. *Mercury is to be particularly avoided while inflammation of the knee exists.*

4. Nodes.	The same general treatment, conjoined with the following applications: Leeches. Poultices. Blisters. Ointment of tartarized antimony. Division of the periosteum. *If the preceding remedies prove inefficient, a mercurial course may be of advantage, provided the general disease is on the wane.*

III. PHAGEDENIC VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The phagedenic ulcer, 2. The sloughing ulcer.	Bread and water poultices, with opium occasionally added. Warm fomentations. General blood-letting, proportioned to the acuteness of pain, inflammation, and symptomatic fever. Antimonials in nauseating doses. Cicuta in full doses. Sarsaparilla.
3. Buboes.	The same treatment as for buboes in No. II.

Secondary Symptoms.	
1. Eruption of tubercles, or spots of a pustular tendency, or both intermixed, preceded by fever, and terminating in ulcers covered with thick crusts which often assume a conical form, healing from their centre, and extending with a phagedenic margin. When the disease is on the wane, they desquamate into scaly red blotches.	General blood-letting, as in No. I. II. Antimonials. Sarsaparilla. Guaiacum. Compound powder of ipecacuanha. Arseniate of kali. Nitrous acid. Nitro-muriatic acid bath. *Mercury, with the exceptions noticed below, increases the ravages of the disease in all its stages, but the last: it may then be given with safety and advantage, as in No. II.*
2. Ulcers on different parts of the fauces, and particularly the back of the pharynx, frequently engaging the entire fauces, and sometimes extending to the nares and larynx.	The same general treatment, conjoined with the following applications: Oxymel Æruginis. Strong solution of muriate of mercury, or nitrate of silver. Fumigations of factitious cinnabar. *If these should prove inefficient, mercury may be used largely with advantage in checking the progress of the ulceration, even though it should exasperate the general disease.*
3. Ulceration, and caries of the bones of the nose.	The same general treatment, with the yellow and black mercurial washes frequently injected into the nostrils. *If these remedies fail, mercury may be used as above.*
4. Pains of the joints.	The same treatment as in No. II. for the same symptom.
Nodes.	The same treatment as in No. II.

IV. SCALY VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The chancre, or callous ulcer. 2. Buboes.	*Full courses of mercury for both primary and constitutional symptoms.*

Secondary Symptoms.	
1. Eruption of scaly blotches, presenting either the character of lepra or psoriasis, and unattended with any obvious degree of fever. 2. Excavated ulcers of the tonsils. 3. Pains in the joints, tibiæ, cranium, &c. 4. Nodes.	The same local remedies as prescribed for the several symptoms in No. II. N. B. It is yet doubtful whether sarsaparilla and guaiacum may not be substituted for mercury in this as well as the preceding diseases.

Observations relative to the Germination of Vegetables.

[From the *Inductions Morales et Physiologiques* de M. KERATRY, p. 112.]

In the month of September, 1815, walking over my land, where persons were employed digging potatoes *(solanum tuberosum,)* I perceived on the ground a fragment of one, of considerable size, (since it formed the half of a spheroid which would have equalled in bulk a hen's egg,) which I was surprised to see had not furnished any germ or sprout. A superficial examination led me to believe that it had been *eyed* (the eyes, or origin of the germs, removed) before it had been employed as seed, for its exterior was in other respects very healthy in appearance; but what I afterwards discovered with surprise, after I had cleansed it from the earth adhering to it, was, that on the plane of the section there was formed a dozen small tubercles, similar in size to large pins'-heads, the most prominent of which occupied the middle of a curved line, in the manner of a diadem; whilst the others, in their decreasing progression, were ranged towards the extremities of the arch, none of which touched, by any point, the rind which formed the lateral boundaries. I omit nothing; I do not here alter any one of the circumstances; for they all seem to me to be very important.

The little tubercles, furnished with a pre-eminent germ, visible without the aid of the glass, were perfectly formed, touched each other, and made one continuous substance with the pulp that remained solid. I should have expected that this would have undergone the process of fermentation common to farinaceous or mucilaginous substances, destined to nourish the products of vegetation.

Doctor DUBOSQ, and the "directeur du cadastre," DESSAUX, both versed in the knowledge of natural history, and settled in Finistere, have held in their hands this fragment of potatoe, which appeared to them to merit their attention.

Here then is a plant perpetuated without the aid of root, sucker, slip, eye, tuberculated bark, or the bark of branches, often the depositary of germs; and without any development of leaves or of flowers!

Does it not follow from this fact, the truth of which I affirm, that the sappic juice, elaborated in the organs of a vegetable, transmitted by appropriate canals, and perfected in the cellular tissue, after having passed through a proper degree of fermentation, may be fitted to class its molecules according to a regular system of organization? We are even led to believe that it may contain a sufficient quantity of parts proper for the formation of the germ, which would best develope themselves, and unite themselves most easily, by the usual means of fructification, but which, in certain favourable circumstances, may become, in an almost immediate manner, organic wholes.

CRITICAL ANALYSIS

OF

RECENT PUBLICATIONS, IN THE DIFFERENT BRANCHES OF MEDICINE AND SURGERY.

"I would have men know, that, though I reprehend the easie passing over of the causes of things "by ascribing them to secret and hidden vertues and properties; (for this hath arrested and laid, "asleepe all true enquiry and indications;) yet I doe not understand but that, in the practical "part of knowledge, much will be left to experience and probation, whereunto indication cannot "so fully reach: and this not only in *specie*, but in *individuo*. Yet it was well said, *Vere scire* "*esse per causas scire.*"—BACON.

Observations on the Symptoms and Specific Distinctions of Venereal Diseases; interspersed with Hints for the more effectual Prosecution of the present Enquiry into the Uses and Abuses of Mercury in their Treatment. By RICHARD CARMICHAEL, M.R.I.A. one of the Surgeons of the Richmond Hospital, House of Industry, &c. &c. 8vo. pp. 221, with a coloured plate. Longman and Co. 1818.

"He is a foolish physician who, instead of curing his patient's disease, doth cast him in another sickness."—MORE's *Utopia*.

THE diseases which form the subject of this work have many forcible claims on the most earnest attention of the medical philosopher. The history of their progress during the last three centuries displays, perhaps, the most afflicting series of calamities recorded in the annals of our art. Plagues and pestilence may have caused more extensive destruction of human existence; but, if we trace the physical effects of those maladies through all their direct and devious courses, and then add to these the moral ills consequent on those illustrations of the sad truth, that

——————e medio de fonte leporum
Surgit amari aliquid, quod in ipsis floribus angat;

it will be evident that they have been one of the greatest scourges the genius of Evil ever sent forth to desolate mankind. But, we rather choose to turn to the prospect opened to our view, and contemplate the happy change about to ensue from the application of the true elements of medical logic to researches on the pathology and treatment of those diseases. We have an ample scene for this in the work of Mr. Carmichael.

The author commences with a concise but lucid view of the principal difficulties that have attended the investigation of the nature of these diseases, and the most serious of the errors into which pathologists have fallen in their mode of conducting their researches. We have, he says, been long taught to believe that mercury was the only remedy for every form of venereal disorder, gonorrhœa excepted. It was therefore time to commence the investigation, when every practitioner must have met with circumstances to shake his faith in the powers of the remedy,

from perplexing embarrassments and inextricable difficulties, accumulating upon him, as long as he persisted in the exhibition of this specific. But, he continues,

"In order to preserve our faith unshaken, ingenious devices were sagaciously resorted to. By one of these we learned, that not only the new symptoms which arose under the most severe courses of mercury, but even the old ones which resisted its influence, were attributable to the remedy and not to the disease. Hence we have descriptions of mercurial chancres, mercurial ulcers, pains, nodes, and swellings of the lymphatic glands of the neck. But, in ascribing those symptoms to mercury, we have entirely overlooked this obvious circumstance, that *that* medicine, when exhibited even to profusion for liver or any disease which is not venereal, has never in any one instance produced those effects."

Mr. Carmichael is willing to allow that, on the occasions just mentioned, mercury, although it has not the power totally to supersede the actions of the morbific poison, may yet so far alter or modify its effects, as to change the appearance and natural progress of the disease. But this, he says, "is different from an admission that the remedy will produce symptoms which can scarcely be distinguished from those of the poison itself."

This doctrine, although it is not satisfactory to the judgment, seems to be so far supported by observation as to lead us to consider it as a valid basis for our practical indications. It should be considered as a subject urgently requiring a new and particular investigation. But the most serious errors into which we had fallen, are now to be noticed.

"Another device, common to many arts and sciences besides surgery, is an endeavour to conceal our ignorance by the adoption of plausible and delusive epithets and appellations. The term syphiloidal I cannot but regard in this point of view: it is usually applied to those symptoms which continue to linger after the patient has undergone full and repeated courses of mercury, and which that medicine was found incapable of curing. Those, therefore, who looked upon mercury as a certain cure for every form of venereal disease, found it necessary to give those unaccommodating symptoms a name: they therefore called them syphiloidal, which, if it means anything, insinuates that something is present which resembles or appertains to syphilis, and which is not syphilitic. The coinage of this name, however, gave them an opportunity of relinquishing the further use of mercury, without making the mortifying acknowledgment that they had been using, to a dangerous extent, a medicine incapable of curing the disease for which it was exhibited. These subterfuges were however useful, and I will even say reflected some credit upon those who devised them, as they obviated the injurious perseverance in the use of the medicine, which might otherwise have been considered a matter of necessity.

"Since, however, it is now well known that certain forms of vene-

real disease will pursue their course whether mercury is employed or not, it is absurd any longer to retain words in our vocabulary, which are calculated to mislead us from the truth. Nothing, I am certain, would tend more to promote the present investigation, and the attainment of a perfect knowledge of venereal diseases, than to drop altogether those common but arbitrary terms, syphilitic, syphiloidal, and pseudo-syphilitic: even the term mercurial should be restricted to designate those phenomena only which are known to arise from the use of mercury in other diseases besides the venereal, by which means we avoid the perplexity of confounding the symptoms arising from the poison with the effects of the remedy.

"In place of those arbitrary names, which mean nothing, if surgeons would confine themselves merely to terms descriptive of appearances and symptoms, language would not be wanting to convey an adequate notion of any class of diseases."

Those sentiments are in conformity to the true principles of medical logic, and will be acceded to by every person who is able to discern the means by which medical knowledge can alone be accurately acquired, and displayed with clearness and precision.

The distinctions which Mr. Carmichael has observed in the appearance and progress of certain groups of symptoms, which usually went together in diseases apparently arising from venereal congress, led him to presume the existence of a pleurality of poisons, which are propagated in this manner. The best pathologists seem to be well inclined to concur in this opinion, which is not only supported by daily observation, but also by the most authentic historical records. It seems hardly to admit of a doubt that animal poisons have been casually called into existence, that have been diffused throughout whole nations by venereal congress, at various epochs; and we think the opinion of Dr. Weizmann, of Bucharest,* that these poisons have frequently originated on the connexion of different races of people, merits particular attention. Literary records will probably not furnish the means of fully deciding this question, but, as far as our researches have hitherto extended, they powerfully support the opinion under consideration. We cannot in this place indulge in details on this subject, but we may observe in general, that, at different epochs since the eleventh century, alarms have been spread throughout one or more nations of Europe, by the progress of some dreadful ulcerative disease, obviously propagated by venereal intercourse. For instances:—soon after the crusades, the dispersion of the Moors, the expulsion of the Jews from Spain, the discovery of America, the war in Canada. We may add, too, that many curious facts

* See *London Medical and Physical Journal*, vol. xli. p. 64.

respecting hybrid animals and vegetables, seem to lend some support to the same opinion.

Whether or not Mr. Carmichael has precisely determined the number of the species of poisons ordinarily propagated by venereal intercourse at the present time in this country, is a question we cannot pretend to enter into the discussion of; but this is not of much importance in the view in which he has regarded these diseases, which we cannot too much approve. His object is to determine the character, series, and order, of their symptoms; and the appropriate measures for their cure, especially when mercury should, and when it should not, be employed. This is a view of the subject which must be fully approved, even by those who consider that the varieties of character which Mr. Carmichael has distinguished, depend on peculiarity of constitution of the patient, not on a specific difference in the nature of the morbific poison.

Mr. Carmichael has, however, adduced evidence of the most powerful kind, although not sufficient to decide the question, to favour his distinctions of venereal diseases: he says,

"We observe many primary ulcers evince, from their very commencement, such peculiar and distinct characters, that it would be quite an absurdity to believe that the virus is always the same, and the variety of characters dependent alone upon constitution.

"Thus nothing can be more opposite, even from the commencement, than the common chancre with its hardened base, like a piece of cartilage under the skin, and the sloughing ulcer. The first is slow and chronic; the latter begins with a mortified spot, extends by alternate sloughing and phagedenic ulceration, and makes more progress in three days than the former in as many weeks.*

"The phagedenic ulcer is equally distinct from chancre, as it does not evince at any period a hardened base, but gradually creeps from one part to another of the penis, leaving those parts to heal which in the first instance it attacked. So that, when the disease has existed for some months, the glans is seen to exhibit its entire surface furrowed over with ulcerations and cicatrices.

"There is a raised ulcer also with elevated edges, approaching the nature of the phagedenic ulcer, yet whose characters are sufficiently distinct to be considered as a separate species.† But the most common venereal primary ulceration presents such various appearances in different individuals, that, until a more exact knowledge is obtained, it is better described by its negative than its positive qualities; and it may be designated an ulcer without induration, raised edges, or phagedenic surface.

* "A striking elucidation of this fact is afforded by Case lxviii. p. 162, of my *Essay on the Venereal Diseases which have been confounded with Syphilis*, &c.

† "For a more particular description and examples of this ulcer, see chap. iii. p. 62, of my former Essay; and also the *London Medical and Physical Journal*, for December 1815.

"If the plurality of venereal poisons is supported by the variety of primary ulcers, it is equally so by the multiplicity of constitutional eruptions. A primary ulcer, which was not phagedenic or sloughing at first, may afterwards, like any other ulcer, become so by irritation, neglect, or inflammation. But I do not conceive that we have grounds for supposing that the state of the constitution can so modify morbid poisons, as to cause the same virus to produce in one person the chronic scaly lepra and psoriasis, and to assume in another a decided pustular form, each pustule spreading rapidly into a deep ulcer.*

"These two kinds of eruption may serve to illustrate the subject, as in their nature they are so directly at variance. But I would be inclined to admit, that an eruption of papulæ with acuminated heads containing matter, and approaching the pustular form, might be so affected by the constitution as not to be distinguishable from the most regular pustules. The character of the disease may however still be apparent, as their pustules, instead of spreading into extensive ulcers, will, like papulæ, terminate in desquamation; but the scales will be larger; and, in addition to this circumstance, the pustules will throughout be intermingled with papulæ. These circumstances may serve to distinguish, in doubtful cases, the form of disease which is attended by the venereal lichen or papular eruption, from that which is much more formidable, and produces pustules which end in obstinate ulcers, that spread at their circumference by a phagedenic edge, and heal from their centre."

Pursuing the investigation of the progress of these diseases, Mr. Carmichael found that each of the species of primary ulcer above described was followed by a certain and peculiar order of secondary symptoms; and in the following manner:

"*First*,—That the syphilitic chancre is attended by the scaly eruptions lepra and psoriasis, an excavated ulcer of the tonsils, and pains and nodes of the bones.

"*Second.*—That the ulcer without induration, raised edges, or phagedenic surface, gonorrhœa virulenta, and excoration of the glans and prepuce, are followed by a papular eruption, which ends in desquamation, pains in the joints resembling those of rheumatism, soreness of the fauces, and frequently swelling of the lymphatic glands of the neck; but that, in a vast number, not a single instance was observed in which nodes were an attendant upon this eruption.

"*Third.*—That the ulcer with elevated edges, in the few instances in which I had an opportunity of tracing it to its constitutional symptoms, was followed by a pustular eruption, which terminated in mild ulcers, pains in the joints, and ulcers in the throat, but no appearance of nodes; yet that the instances in which I had an opportunity of witnessing distinctly the connexion between the primary and secondary

* "The reader may compare the different species of eruptions delineated in the plates of my former Essays; but particularly let him compare the scaly chronic syphilitic eruption in plate i. with the acute pustular eruption in plate iv. These forms of eruption are as dissimilar in their progress as they are in their appearance.

symptoms of this poison, were too few to form any conclusion with respect to this particular.

"*Fourth, and lastly.*—That the phagedenic and sloughing ulcers are generally attended by constitutional symptoms of peculiar obstinacy and malignancy; viz. pustular spots and tubercles, which formed ulcers that spread in general with a phagedenic edge, and heal from the centre. Extensive ulceration of the fauces, particularly of the back of the pharynx; obstinate pains of the knees and other joints; while nodes are frequently present, and the bones of the nose are occasionally affected."

After passing in review the opinions of Mr. Rose, Mr. Guthrie, Dr. Thomson, and Mr. Hennen, respecting the cure of the syphilitic species of disease without mercury, the author relates the results of his own experience. We may now pass over this part of the work, since it engaged our attention on a former occasion, (see vol. xli. p. 60 *et seq.*) to the chapter on *Iritis*.

In his former essay on Venereal Diseases, Mr. Carmichael expressed himself disposed to consider *venereal iritis* as a consequence of the poison of *syphilis*, or that which occasions the *chancre* (of John Hunter) and the *scaly eruption*, because he had always seen it yield quickly to mercury, and he had not then seen this affection accompanied with any eruption. Since that period he has met with many cases of this combination of symptoms, and, with one exception, the eruption was always papular: of this, several cases are adduced. These observations are particularly interesting; they serve to elucidate an obscurity in the history of iritis, which so much embarrassed Mr. Travers in his researches into the nature and cure of this affection. We cannot follow the author through all his judicious and highly valuable reflections on this subject; but, by way of summary, it may be stated, that it appears, from Mr. Carmichael's observations, that iritis is a symptom of the disease attended with the papular eruption, which disease will run its course in spite of the use of mercury, although some of its symptoms may be removed by that remedy; that it will occur with the papular eruption, when no mercury has been used; that it will happen without the presence of any eruption; and that, in either case, the use of mercury, although not essentially necessary for its cure, will be beneficial in conjunction with antiphlogistic measures, by assisting in removing the inflammatory action, and by preventing its disorganizing effects.

The subject of the next chapter, the *phagedenic ulcer*, is the most serious, and hitherto the least understood, of the forms of venereal disease. We may, in the first instance, refer the reader to the thirty-fourth volume of this Journal, for Mr. Carmichael's description of the character of this ulcer.

The origin of this from a peculiar species of morbific poison, has been disputed by some pathologists. They consider its phagedenic character to depend on the state of the constitution of the patient; and state, they have observed many cases of venereal ulcer, of the ordinary character on their first appearance, which have subsequently assumed all the characters of the ulcer designated by Mr. Carmichael as the primary phagedenic ulcer, and which have also been followed by the eruption he considers peculiar to that species of primary affection. This objection has been expressly made by Mr. GUTHRIE. This is an important objection, because, what forms the most powerful evidence of the propriety of Mr. Carmichael's distinctions, is the constant and regular connexion of the primary and secondary symptoms which he has described. In reply to this, the author states, that in every instance where he has had an opportunity of tracing the constitutional symptoms to the primary ulcer, this ulcer has always exhibited the phagedenic character; and it should be observed, that Mr. Guthrie acknowledges that the ulcers he refers to became afterwards phagedenic.

There is much difficulty attendant on the investigation of this question, which, as Mr. Carmichael readily acknowledges, requires further observations to enable us to come to a decision. These ulcers, he remarks, are not often seen in their first stage, generally not till some days, or even weeks, have elapsed, in consequence of the little uneasiness they then occasion; and to this must be added the fact, that various accidental causes will make any species of ulcer become phagedenic. The constitutional symptoms that Mr. Carmichael has seen ensue from ulcers of the latter kind, have however been of a mild character, and readily admit of cure; whilst those that have occurred after the primary phagedenic ulcer are always of a formidable character, and long and difficult of cure.

We, on a former occasion, mentioned that Mr. Carmichael had some doubts respecting the power of mercury to prevent constitutional affection from the syphilitic primary ulcer; he is still less disposed to place confidence in the efficacy of that medicine to prevent the constitutional symptoms of the phagedenic disease. He does not absolutely protest against its use; but, if it be employed, it should not be resorted to until the primary ulcer is perfectly healed. It is decidedly injurious in all cases in the primary affection. This latter point is generally agreed on by experienced surgeons; and wine, bark, and opium, are the remedies on which they have usually placed their reliance, until its phagedenic character has disappeared, and the ulcer, if not quite, at least very nearly, healed. Mr. Carmichael places most reliance on the efficacy of copious blood-letting in the treatment of this disease. He has frequently seen cases

where the ulcers spread rapidly under the use of the remedies we have mentioned, but ceased their ravages on the occurrence of a spontaneous or artificial hæmorrhage. With this he has usually conjoined antimonials, purgatives, cicuta, and opium. Warm fomentations and bread-poultices, frequently with the addition of opium, are recommended, as local applications. In every instance, low diet and the recumbent position should be strictly enjoined.

We now enter on the consideration of the secondary symptoms, which the author considers to be peculiar to the species of primary ulcer just described.

The eruption is frequently ushered in by a high degree of fever, and it "quickly passes into ulcers covered with thick crusts, that heal from the centre, whilst they are extending at the circumference with a phagedenic border." To this description we shall add some particular observations that our own experience has afforded, which we think may be useful to the young practitioner, in assisting him to form the diagnosis of this affection. Whether it is the result of the influence of a distinct poison, or of syphilitic virus modified by particularity of constitution, may admit of doubt; but it is certain that there is an affection, offering constantly the morbid characters here detailed, which is always formidable in its progress, and for which mercury is not an efficacious remedy. Reasoning by analogy on these data, would lead us to consider it as a distinct disease.

The eruptions, a few days after their first appearance, we have usually found to be about the size of a pepper-corn, not quite so prominent as the pustules of small-pox, forming about half a sphere; they are not surrounded by much diffused redness in the first instance, but this appears generally at a later period; the interstices are then very red, or of a purplish colour. The arms, neck, face, and shoulders, are the parts chiefly, and almost simultaneously, affected. The ulcers are very painful, and sometimes spread to a diameter of one or two inches; often covered with fungus; and, when clean, have a scooped appearance. We have a suspicion that this disease may be communicated by these secondary ulcers, from having witnessed an ulcer on the prolabium of a female, obviously produced from contact with the matter of the secondary ulcers just described, which assumed all the characters of the primary phagedenic ulcer, and caused a considerable destruction of parts, before it was induced to heal by the exhibition of wine, bark, and opium. It should be observed, that there was a slight breach of surface on the lip before the contact of the morbid matter. We could not ascertain whether or not this patient had secondary symptoms, having lost sight of her soon after the healing of the ulcer.

The affection of the throat, Mr. Carmichael observes, that attends the phagedenic disease, is of the most formidable character: it attacks more particularly the back part of the pharynx, sometimes passes upwards to the nares, and occasionally extends to the epiglottis and the larynx. The ulcer is mostly covered with a thick, white, tenacious, matter, and is attended with considerable difficulty in deglutition. The ulceration often extends to the adjacent bones. It is this disease which causes the destruction of the bones and cartilages of the nose. Mr. John Pearson used to state, in his lectures on the venereal disease, that he had seen only two or three cases where the nose had been destroyed by syphilis, when suffered to proceed uninterrupted by art; but a great many by the influence of mercury. Mr. Carmichael has shown us how this circumstance should be regarded; that it is not from the influence of mercury alone that this destructive ulceration has ensued, but from mercury having been employed in the treatment of the phagedenic disease, and generally to a very great extent, in the hope of thus deriving benefit from it, after the ordinary measures had been used in vain: finding, then, the disease exasperated by the use of the medicine, the surgeon was led to consider it as the consequence of its agency.

Inflammation of the parts constituting the joints, especially of the synovial membranes, is another frequent affection in this disease.

"Nodes were only traced to the phagedenic primary ulcer in such cases as were treated with mercury. Both Mr. Guthrie and Mr. Rose have stated the remarkable infrequency of this symptom in numerous cases which were treated without that medicine. The question, therefore, whether they occur in this form of disease where mercury has not been exhibited, remains to be resolved by future experience.

"The train of symptoms I have been endeavouring to describe, is so often found to be injured rather than benefitted by the exhibition of mercury, that we may well ascribe to this circumstance the coinage of the favourite terms mercurial, (in the unrestricted sense in which it is employed,) syphiloidal, sequelæ, &c. &c. and I have no doubt but that this form of venereal disease has at length led to the present investigation, to ascertain how far venereal complaints can be combated without the exhibition of mercury; an investigation, which, in spite of the common-place declamation and untractable dogmatism of professional bigots, will, I am persuaded, lead to an improved line of practice, and confer the most important benefits upon society."

Mr. Carmichael repeats, that he has not a doubt but that the embarrassing obstinacy of this disease arises from the premature and indiscreet interposal of mercury, which interrupts and encumbers its natural progress, and transfers it to the deep-seated parts,—as the periosteum, fasciæ, and bones.

The synopsis of the pathology and treatment of venereal diseases according to the doctrines of Mr. Carmichael, (which is transcribed in another part of this Journal,) will furnish a general account of his precepts for the treatment of the constitutional symptoms of the phagedenic malady. We shall here only observe, that mercury is of but occasional and partial utility; is more frequently deleterious than beneficial; although it sometimes alleviates some of the symptoms, it will not check the progress of the disease; and new symptoms commonly appear, when the system has been long under the influence of that medicine.

This disease in many respects resembles yaws; and the author refers to the work of Dr. Adams on Morbid Poisons, for some interesting facts and valuable observations illustrative of this resemblance.

We cannot follow the author through all his reflections on the mode of treating the different forms of this disease; they can only be contemplated with all the benefit they are calculated to produce, in connexion with the cases which accompany them, which serve as illustrations. We must also remark, that the value of the doctrine contained in this work is much increased by a view of it which now forcibly presents itself. The author has methodically illustrated his principal points of theory by appropriate cases, which render his descriptions perspicuous, and at the same time show the bases on which they are raised.

The diseases of a less-distinctly marked character, though resembling in some respects the phagedenic malady, is next considered. On this subject we do not find many observations of important novelty, after the history Mr. Abernethy has given of those affections.

This work concludes with some critical remarks on the opinions of Mr. Charles Bell respecting the nature and treatment of venereal diseases.

From the account we have given of this treatise, it must, we think, be evident that it is calculated to be productive of much benefit to medical science. Although the pathological distinctions the author has formed of the diseases that form the subject of it should not prove to be precisely correct, a question which remains to be decided by further experience, his accurate and perspicuous histories of those affections will not be the less valuable, either in a nosographical or therapeutical point of view: all other objects are of far inferior importance. The true principles of medical logic which have guided the author's researches, and the methodic manner in which he has displayed the results of his labours, may serve as a model to those who may continue the investigation of the history of the same maladies.

Practical Observations on the Causes and Cure of Insanity. By WILLIAM SAUNDERS HALLARAN, M.D. Physician to the Lunatic Asylum of Cork, and a Corresponding Member of the Association of the King's and Queen's College of Physicians, Dublin. Second edition. Edwards and Savage, Cork; and Longman and Co. London. 8vo. pp. 213. 1818.

"Nisi sanatus animus sit, quod sine philosophia fieri non potest, finem miseriarum nullam fore."—CICERO.

"THE cloud of darkness and uncertainty which still, unfortunately," says the author, "pervades this department of medical science, is deeply to be lamented. An extraordinary neglect on the part of physicians of due attention to the subject of insanity, bespeaks a supineness for which there cannot be any admissible excuse."

We acknowledge the truth of the sentiment expressed in the first of the foregoing sentences, and shall have occasion, before we have concluded our review of this work, to notice some of the most powerful of the obstacles which have prevented the elucidation of the nature of this malady. But, that insanity has been neglected by physicians of modern ages, is not so evident. They have in general devoted as much attention to this subject as could be thus beneficially applied. The nature of the affection, from which the patients of it are ordinarily collected into particular receptacles under the superintendance of a few individuals, must however deprive the generality of physicians of the means for making original observations; but, that those who have possessed this advantage have not failed to employ it in a proper manner, is so clearly shown by the medical literature of Europe, as to render a formal demonstration of it unnecessary.

We pass over the rest of the introduction, since it contains nothing worthy of remark, except some erroneous doctrine respecting "mental insanity," that we shall not meet, with more fully displayed, in the author's "*pathological division of insanity.*" Dr. Hallaran commences this subject with stating that

"A principal object of this treatise is, to point out the practical distinction between that species of insanity which can evidently, *ab initio*, be referred to mental causes, and may therefore be denominated mental insanity, and that particular excitement, which, though partaking of like effects, so far as the sensorium is engaged, might yet appear to owe its origin merely to organic disease. Authors on this subject seem, heretofore, to have passed over this necessary consideration."

The principal object of this treatise is, then, to advance a point of doctrine, which has not been excelled in absurdity by any of the chimerical dogmas that error has in any age intro-

duced into medical reasoning. The invention of such a doctrine a few centuries since, when almost every branch of science was cultivated on erroneous principles, cannot excite our surprise; but it does this, to find it brought forward at a period when the influence of the works of BACON, of LOCKE, and of CONDILLAC, is generally diffused amongst men engaged in the pursuit of science. Bacon teaches us, that the only knowledge we can acquire of nature, is the history of phenomena evident to our senses; and the metaphysical principles of Locke and Condillac, principles acquired in the mode inculcated by Bacon, declare the notions advanced by Dr. Hallaran respecting the human mind to be utterly erroneous. This is the conclusion our best principles of metaphysics lead us to form respecting the proposition, that intellectual insanity can exist independant on corporeal disorder. But let us examine the subject in a physiological point of view; or rather, the arguments of this nature produced by Dr. Hallaran to support what he pleases to consider as his own original doctrine. We shall not enter into a general discussion of it, because it is of a very ancient date, and is now, we believe, almost universally abandoned. As far as we can learn from literary records, it was first adduced by PLATO, (see his *Timæus* and *Theatetus*;) but the Grecian physicians, cultivating physiology on the principles of HIPPOCRATES, would not admit it: it was again brought forward when the philosophy of DES CARTES, or rather of PEREYRA, came into vogue; and was finally extensively displayed by Dr. ARNOLD, in his treatise on Insanity. These observations will serve as our apology for not entering into a regular discussion of this subject.

The author, as his first argument, says,

"I would advert to the many well-authenticated instances of insanity, as they have occurred within the last twenty-five years especially, and are noted on the records of our lunatic asylum. Amongst those are several which have owed their origin to mental causes, strictly speaking,—such as dread of punishment, loss of friends, shame, sudden terror, remorse, &c."

Every physiologist knows (it is proved by dissection) that dread, terror, remorse, and all the passions, are accompanied with inordinate cerebral actions; and LOCKE teaches us, that these inordinate actions only arise, either immediately from the impressions of external objects on the organs of sense, (to which modern physiologists are disposed to add those from the viscera, &c. but this does not alter the question in dispute;) or, subsequently, from the same actions being reproduced by the agency of memory. Dread, grief, shame, terror, remorse, &c. and their consequences, are then essentially dependant on corporeal disorder. Permanent or remittent insanity is sometimes

the result, because those causes may induce either functional or organic lesion.

The author again says,

"The influence of terror on the human mind suddenly induces uncontrollable madness, without seeming to disturb any of the principal organs of vitality."

We have never seen a case of this kind, and we do not think there is another physician in existence who believes that it can possibly happen. If Dr. Hallaran will say that he has seen instances of it, we will say that he has seen inaccurately. But let us proceed: Dr. Hallaran says,

"I cannot question the immateriality of the mind or soul; but I will not deny that the mind or soul sickens. So long as the soul remains incorporated with man, so long will it partake of his nature, according to his attributes."

And again,

"The diseased manifestations of the mind, arising from terror, grief, excess of joy, remorse, shame, loss of property, and despair, prove the sensibility of the mind, though they betray its weakness. To deny the influence of those contending passions, would be, in some respects, to stifle principle, and to sink man below the level upon which Omnipotence had thought fit to place him. If the mind never sickens, conscience, the great inquisitor and monitor of man, would prove of no avail. Yet, this conscience, this mind, this soul, of man, is but too often most sorely afflicted. It encounters disease with a mighty struggle, and is sometimes triumphant. If the wound be deep, however, it will 'fall sick;' and with this sickness will come death. 'The spirit of a man will sustain his infirmity; but a wounded spirit who can bear?' (*Proverbs*, ch. xviii. v. 14.)"

This is such utter and irrelevant nonsense, that we almost criminate ourselves for having thought the author's arguments on this subject worthy of our notice. But, as we have commenced, we will proceed:

"The mind is capable of impressions which evidently disturb its natural functions: it will continue thus disturbed for a series of years, and not impart any ostensible disease to the organs of life; it will be partially or generally affected, and will frequently, without any strong effort, resume its original character."

Those impressions (corporeal, of course; or, if not, what can they possibly be?) which disturb the natural functions of the mind, are disordered, or diseased, impressions. No action that destroys the harmony of the economy can be considered as an healthy action. That insanity exists for a series of years, without producing "any ostensible disease in the organs of life," is very doubtful. But this is not a point of material importance, because it is well ascertained that functional derangement, es-

specially deranged circulation, will exist in the brain for years, without dissection furnishing ostensible disease. We can point out sufficient proof of this fact, and at the same time direct the attention of the reader to an excellent practical work, by referring to Dr. PARRY's *Elements of Pathology*.

We will not argue on the absurdity of supposing that an immaterial existence can be *partially* diseased, and have efforts in itself by which it diseases itself, and then by an effort restores itself to health. We wish to consider the subject physiologically.

Dr. Hallaran proceeds to say,

"If the mind, under those circumstances, be not diseased, how are we to account for the relief which has been so repeatedly obtained, through agencies that cannot be supposed to influence any other than the perverted powers of the intellectual faculties?"

The influences to which the author here alludes are moral influences, which act on the mind through the medium of the brain, and may casually relieve the disease of the brain causing diseased manifestation of the intellects, just as the same influences will remove the disease of the brain, causing *epilepsy*, and even lesions in the functions of more remote parts, appearing as chorea, hysteria, ague, &c.; instances of which occur almost daily to the observance of the physician. A remarkable instance of this kind is that which BOERHAAVE relates of his curing, simultaneously, a whole troop of young girls, in an orphan asylum, affected with epilepsy, by threatening to burn them if the fit again occurred, and exposing the red-hot iron to their view. The great excitement thus produced in one portion of the brain, may probably remove that existing in another, as cauteries, &c. do diseases of parts adjacent to those to which they are applied, or those distantly situated, by sympathetic or nervous influence.

Dr. Hallaran, pursuing his course, adduces the following case in support of his hypothesis:

"Mental delusions, inciting to suicide, have often occurred, and, to my knowledge, are now in danger of occurring, where no bodily infirmity has been ever ascertained to account for such a propensity. The present justly-celebrated Dr. Gregory, of Edinburgh, was accustomed to relate a case, in his clinical lectures, very much in point, of a man, who, in a fit of insanity, had determined on self-destruction; and who had escaped from his house in London, at night, with the determination of precipitating himself from Westminster-bridge into the Thames. When about to complete his purpose, he was suddenly assaulted by an armed footpad, who threatened him with instant death. This not being the mode by which he had purposed to part with life, alarm for his safety instantly seized him, to the exclusion of the hallucination which had been but the moment before predominant. Being

freed from his unsought danger, he, with altered sentiments, returned to his family, fully impressed with the criminality of his design, as well as relieved from the pressure of his previous perplexity.

"Are we, from this well-authenticated fact, to infer that the individual alluded to had been, at the time of so sudden a transition from disease to health, a sufferer from the consequences of mere corporeal ailment? What form of bodily complaint could have been urgent, which, with such unexampled rapidity, was disposed to give way? We do not in general find diseases, arising from organic lesion, disposed to assume the healthy aspect with this convenient speed. The mind, we must here admit, had sickened, and was diseased."

The remark we made respecting the cure of epilepsy, will also explain the nature of this case; and though "diseases arising from organic lesion *are not* disposed to assume the healthy aspect with this convenient speed," diseases arising from functional derangement are thus commonly relieved; especially in the brain, where a little inordinate vascular action will produce great disturbance of its faculties. As we like to support our opinions by those of others, we refer for proofs of this statement to a work in the possession, we hope, of every medical student, —the *Elements of Pathology*, of Dr. Parry.*

"The sequel of this case," (of the man who intended to drown himself,) says Dr. Hallaran, "enforces the conclusion, no proof of corporeal or organic injury had been alleged." We allege again, that the existence of insanity was a proof of organic injury; and the want of evidence of this injury by other symptoms proves nothing, because it is so common to meet with organic lesion in the brain when it has not been suspected by every physician.

We have noticed all that the author has produced, bearing the semblance of argument, in favour of his hypothesis of the "mental origin" of insanity: we shall now extract a passage from his work, in which he himself refutes his own propositions.

"Doctor Spurzheim admits, that 'certainly the manifestations of the mind may be deranged.' Those manifestations I am disposed to consider as the essence of the mind at the time being. If the manifestations of the mind be diseased from any given cause, they naturally must betray an unsound mind, in the ordinary acceptation."

Now, if the manifestations of the mind be the essence of the mind, ("at the time being" is a vague and unmeaning expression, because the essential quality of a thing is its quality at all times and on all occasions,)—the essence of the mind must be

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* We must here remark, that we speak with such approbation of this work, because of the multitude of accurate observations it contains relative to the phenomena of disease: these are equally valuable, whatever opinion may be held of the physiological basis on which the doctrine contained in that work is raised.

corporeal actions, for every physiologist must acknowledge that such actions essentially constitute the manifestations of the mind; then, as a postulate, a deranged mind consists essentially in deranged corporeal actions; and the profound deduction! that diseased actions betray diseased actions, no one will object to. This is the author's doctrine, not our's: we are not such confirmed materialists.

We but rarely find persons give so ill an exposition of their own doctrines as Dr. Hallaran has done of his on the nature of insanity. We in general see them, after *eight years'* reflection, able to attribute a plausible character to principles almost as chimerical as those forming the basis of this work. Bijoux, a keeper in the menagerie at the Jardin des Plantes, who formed a classification of animals from the shape and colour of their excrements, could make a very profound and logical oration on the merits of his system, and it was quite impressive to hear the ingenious arguments he would produce to show its propriety; but, what is very extraordinary, and indeed unprecedented in the annals of science, he died (poor fellow!) without leaving behind him an apostle, to teach and perpetuate the knowledge of his discoveries.

Although we were to join Dr. Hallaran in his lamentations over neglected psychology, we could not recommend the results of his labours, to vindicate its cause, to the attention of our readers: in the want of all the existing dissertations by ancient and modern physicians, we would rather study the *Alma* of Prior; there is in that at least as good logic, and certainly much better physiology, than in the treatise of Dr. Hallaran.

The work of Dr. Hallaran, then, we observe with regret, tends much to favour the progress of pure empiricism: it shows that, without correct physiological principles, a person may in some cases be a good medical practitioner; for, the lunatic asylum over which he presides, is remarkable for the great proportion of cures, (especially when the causes of the disease in a great number of the patients therein admitted are considered,) effected within its walls; and we know that the moral and medical management, is there conducted with great propriety, so, indeed, as to be strikingly evident, in the former respect, to the patients themselves when convalescent.

If we were to indulge in a particular account of that part of the work which relates to the treatment of the disease, we should have much to notice with terms of warm approbation; we here find the remarks and precepts of a good practical observer, and feel increased regret that the assumption of erroneous psychological and physiological principles, should have led the author into the erroneous reasoning contained in the part of the work that has passed our particular review.

We must however describe the arrangement of the subjects, which is good in a practical point of view. Dr. Hallaran considers, in order, the general and local causes of insanity; its hereditary nature; the prognosis in its various forms; the method of cure in general; and then the particular remedies, as venesection, local blood-letting, emetics, purgatives, the circular swing, digitalis, opium, camphor, restraint, vesicatories, mercury, warm and cold bathing; the treatment during convalescence, and in the chronic form of the disease; the efficacy of spirit of turpentine in maniacal epilepsy; and he concludes with some reflections on the moral management.

Those subjects are treated with much precision, and with a spirit which shows the man of good talents, especially of acute observance. The knowledge of the results of the author's experience will be of great utility to those who are particularly interested in the acquisition of information respecting the treatment of this disease. For the illustrations of these remarks we refer to the work; an abstract would not place them in a proper point of view.

The Dublin Hospital Reports, and Communications in Medicine and Surgery. Vol. II. 8vo. pp. 396. Hodges and M'Arthur, Dublin; and Longman and Co. London. 1818.

[*Continued from p.* 144.]

On a Disease of the Lymphatic Glands of the Groin, attended with peculiar Symptoms. By A. Colles, M.D. one of the Professors of Anatomy and Surgery in the Royal College of Surgeons in Ireland, and one of the Surgeons to Dr. Steevens's Hospital.

This disease usually occurred in men between the ages of twenty and forty; Dr. Colles only saw one instance of it in a female. It appeared in the form of a chronic bubo, arising without apparent cause, suppurating very slowly, and remaining open for several months, attended with but very little pain. The remarkable symptoms were the constitutional affections.

"From the very earliest period at which I have had an opportunity of observing this complaint, the constitution is found to be engaged. The patient is affected with head-ach, which is more severe in the morning, and which is increased by stooping: he also admits, when questioned, that he feels more fatigue than usual from long-continued or violent exertions; his pulse is quick, being in no case, when he is out of bed, under 100, and generally beating 120 in the minute. This quickness of pulse appears the more extraordinary, as it is obviously not produced by a high degree of pain, nor is it accompanied by a discoverable derangement of any other of the functions: on the contrary, the countenance is natural, respiration easy, skin of temperate heat and not very dry, tongue clean, appetite as good as usual, and

scarcely ever nocturnal sweats. The patient, however, feels himself more comfortable in the open air than when confined to the house.

"In the treatment, I have confined myself to those means which I have conceived to be calculated to mitigate the severity of the symptoms, and to promote suppuration, which indeed seemed to be generally an unavoidable, and always a salutary, termination of the disease. The head-ach appeared to be alleviated by no class of medicines but by purgatives. These were repeated every day, or every other day, until this symptom was completely removed: very large doses were often required to produce the desired effect. The removal of the head-ach was not attended with a diminished frequency of the pulse. Poultices, warm fomentations, and gum-plaisters, were the only topical applications to which I had recourse. Leeches had been applied, in two instances, before I saw the patients, but apparently without any salutary effect. Cold and (as they are termed) repellent applications, when used for a few days in the earlier stages of the disease, did not appear to produce either benefit or injury."

An Account of an uncommon Disease of the Hand and Fingers. By C. H. TODD, Member of the Royal College of Surgeons in Ireland, &c.

This paper contains some observations of remarkable interest; and Mr. Todd has viewed the subject in so accurate and judicious a manner, that we shall transcribe his account of the nature, and his opinions respecting the origin, of the disease to which they relate.

"As far as I have observed, this species of whitlow occurs only in persons who have passed the meridian of life, and in such as are weak and unhealthy. It is preceded by symptoms strongly indicative of great debility, and of a want of energy in the functions of assimilation. Patients complain for several days of loss of appetite, of flatulence, thirst, and irregularity of the bowels, depression of spirits, and watchfulness; then the local affection takes place, and is most commonly felt at night for the first time, the patient's restlessness being increased by stinging pains in the fingers or hand. At this period small red or livid spots, without hardness or elevation, may be observed, which soon become black. The sensation in the part is between soreness and itching, and the patient is induced to rub or scratch it: this accelerates vesication, the cuticle becomes detached, and a thin and offensive sanies is effused under it. When the vesicles are removed, the subjacent skin appears sphacelated, and superficial ulcers are discovered; the disease showing a disposition to extend by destroying the surface merely. At first, local pain is severe; but in a few days it is not much complained of, and the absence of pain is to be considered rather as a cause of alarm than the contrary. Several parts of the fingers and hands are liable to be attacked by this disease in succession; and it often happens that, when one part is nearly well, another will become affected. This must be expected in any case in which general indisposition continues.

"During the entire progress of this disease the patient labours under a low fever; sometimes this fever does not require confinement to bed, but in many cases it is serious, and is liable to assume a typhoid character. In every instance the functions of the stomach and bowels are imperfectly performed, and all the secretions are diminished: lassitude, mental depression, and anxiety, are among the symptoms most distressing to the patient and to the persons around him.

"The treatment necessary for a disease such as the paronychia gangrenosa appears to be, is so obvious, as to render a minute detail of it at present quite superfluous. However, I may observe, that in this affection our practice must be chiefly directed to counteract constitutional disease and weakness, and to improve the condition of the organs of digestion. Unless these objects are attained, our patient will, in all probability, sink, not under the effects of local irritation, but in consequence of that highly morbid state of the system, of which the topical affection is solely an indication. Before the disease appeared to me in this light, I met with two or three fatal cases of it, in which the affection of the fingers was not of an extent sufficient to account for the unfortunate termination of the complaint. Indeed, I never saw an instance in which the severity of constitutional indisposition could be explained by the local symptoms."

The author relates several cases, which seem to show the truth of his opinions; which are also, in no small degree, supported by our knowledge of the functions and connexions of the ganglionic system of nerves.

Account of a Diseased Appearance in the Intestines of Children. By JOHN CRAMPTON, M.D. Professor of Materia Medica, one of the Physicians to Steevens's Hospital and to the House of Industry, &c. &c.

These observations were made on the bodies of children who died in one of the fever-hospitals of the House of Industry. We transcribe the following passage, as containing some remarks of great practical interest:

"That the epidemic has throughout shown a strong tendency to attack the digestive organs, chiefly in their mucous coats, is fully admitted by most persons who see those fevers on a large scale: it has been sufficiently insisted on by Dr. Cheyne in his report, and an attention to this point tends to improve the practice in fever, where the epigastric distress is present. It shows that we should not confine our views merely to the sensorium, as some have done, but that we should extend them to other organs. Of the distress in these latter, the symptoms will often afford sufficient evidence, but the examination of those who die of such fevers will frequently put the matter beyond a doubt: indeed, the diseased appearances vary so much in those who die from fever, that it is natural to conclude that no particular mode of treatment can be equally suited to fevers, as they occur attended by topical affections in different organs. The lancet and smart purga-

tives, so useful in certain forms of incipient fever, are by no means equally suited to such as are attended with gastric and intestinal distress, except in those instances where the serous membrane of the abdomen becomes inflamed,—an occurrence which may take place at any period; and then it will be necessary to have recourse to general as well as local sanguineous depletion."

It should however be observed, that Dr. John Crampton thinks it by no means clear, that the appearance forming the express subject of these observations, should, in every instance, be considered as the cause of the form of fever which happened to be present: it accompanied the epidemic of the season, it likewise attended the small-pox, and it was observed, in some instances, independent of any febrile disorder. The appearance, he remarks, was similar to that described by Dr. BAILLIE, under the head of dysentery;* a description of it will be found also in MORGAGNI,† and in the Transactions of the Berlin Medical Academy.‡

This paper contains many judicious remarks on the importance of attending to a subject much neglected in this country, —the state of the mucous membranes in febrile disorders; and, had not this been so extensively treated in the *Exposition of the Doctrine of* M. BROUSSAIS, we should have been disposed to adduce several extracts from the valuable memoir of Dr. John Crampton.

The History of a Case of Gun-shot Wound of the Head; in which a Portion of a Bullet, &c. lay in the Substance of the Brain for several Months, without the Mental or Physical Powers of the Patient being injured. By JOHN KIRBY, A.B. Member of the Royal College of Surgeons in Ireland, &c. &c.

This was an instance of a pistol-bullet entering the cavity of the cranium. When the immediate consequences of the injury subsided, the patient continued tolerably well for about six months; but symptoms of irritation of the brain then appeared, and he died about seven weeks afterwards. The following is the account of the appearances on dissection:

"Directly opposite the sinus in the scalp, there was a perforation in the os frontis, sufficiently large to admit the point of the little finger, and a groove in the external surface of the bone leading towards the wound, which had been made for the extraction of the ball.

"The internal spine seemed as if it had been broken, pushed aside, and had again united; for the bone was extremely rough, spiculated, and prominent in this part.

* *Morbid Anatomy*, p. 179; *Baillie's Engravings*, fasc. iv. plate 3, fig. i. and ii.
† *Lett.* xxxi. art. 21.
‡ *Acta Med. Berolin.* Dec. i. vol. ix. p. 69.

"The dura mater, through which there was an opening corresponding with that in the bone, was morbidly adherent to its margin. The pia mater was also pierced, and closely united to the dura mater, in the vicinity of the sinus, which led to an abscess in the left hemisphere of the cerebrum, containing something more than an ounce of pus, and a large ragged portion of a bullet.

"There were several pieces of bone within the substance of the brain at different distances from its surface, and some had passed altogether through it, and lay below the hemisphere. The ventricles contained upwards of a pint of fluid. The remainder of the brain was remarkably firm, and free from all appearance of inflammation."

A Case of Disease of the Gums, which occurred during Pregnancy. By J. PITCAIRN, M.D. Member of the Royal College of Surgeons, London, and Deputy-Inspector of Military Hospitals.

We discern nothing sufficiently interesting in this case to merit any particular remark.

Two Cases of Ruptured Bladder from Accident. By J. W. CUSACK, M.D. one of the Surgeons to Dr. Steevens's Hospital, and Surgeon to St. Patrick's Lunatic Asylum.

The patient of the first case was a man, aged 26 years, who fell in walking whilst the bladder was distended with urine. The usual symptoms of the effects of extravasated urine ensued, and he died eight days after the accident. An opening was made in the abdomen on the third day, to give vent to the diffused fluid. The appearances on dissection were signs of severe and general inflammation of the peritoneal membrane. The bladder was found ruptured on the right side, a little posteriorly, to the extent of an inch in the contracted state of the organ.

In the second case, a man aged 30, it is remarkable that the bladder had been evacuated a short time before the accident; the patient fell from the battlements of a bridge, about twenty feet high, to the ground, and he himself stated, on his feet. He died on the ninth day. The bladder in this case was ruptured almost in the same situation as in the preceding case, and to the same extent.

An Account of a Case of Acute Rheumatic Inflammation, terminating in Peritonitis. By E. M'DOWEL, Licentiate of the Royal College of Surgeons in Ireland.

This case is interesting as an instance of metastasis of disease from one part to another of similar structure. The patient, a woman aged 28, had severe inflammation of the synovial membranes of the knee-joints, which was almost totally relieved by venesection, leeches, &c.; but, after the lapse of a few days, the patient was seized with inflammation of the peritoneum, which,

notwithstanding the use of bleeding, &c. rapidly terminated in death. Dissection showed signs of violent inflammation over the whole extent of the peritoneal membrane; there was also much coagulated lymph on the inner surfaces of the synovial membranes of the knee-joints.

Mr. M'Dowel calls the disease rheumatism, and on this foundation adduces objections to the opinions generally admitted on the nature and seat of that affection; but we shall not uselessly occupy our pages by remarks on these ill-founded speculations. It should however be mentioned, that the remedial measures employed appear to have been appropriate; except that, in a pharmaceutical point of view, it was wrong to mingle tartarized antimony with decoction of cinchona; and we cannot discern what were the intentions in giving such a combination of the materia medica.

A Case of Sudden Death, occasioned by Oxalic Acid. By JOHN MOLLAN, M.D. one of the Physicians to the Dublin General Dispensary.

The patient, a woman about 45 years of age, took, from accident, a solution of nearly two ounces of oxalic acid: almost immediately afterwards she was attacked with vomiting, and complained of a burning heat in her stomach; she had an evacuation by stool, and passed urine; her face and extremities soon became pale and cold, and the skin was partially bedewed with a cold sweat; she vomited almost incessantly; and expired in about twenty minutes.

The patient had experienced an injury on the right side of the chest, a few days previously. Besides signs of inflammation, the following appearances were witnessed, which may perhaps be connected with the agency of the poison:

"The right auricle and ventricle of the heart were considerably distended: on puncturing the auricle a quantity of air escaped, and the heart immediately collapsed. The blood contained in these cavities was dark and fluid, and had a number of air-bubbles floating on its surface. The parietes of the ventricle were thinner than common, as if they had undergone considerable distension. The left ventricle was less contracted than usual, but in every other respect was perfectly natural.

"The stomach, when drawn out, presented the appearance of incipient putrefaction; at the great bulging extremity, the mere laying hold of it between the fingers was sufficient to separate the serous from the other coats. In its cavity about eight ounces of a dark-brown fluid were contained. The mucous membrane was thickened throughout its entire extent, and presented a mottled appearance, the greater part of a dark-brown or blackish colour, as if blood was effused into its structure; whilst the interstices, particularly along the greater

curvature, were similar to a finely-injected membrane. The appearances of disorganization were most remarkable at the bulging extremity; yet I have seen the mucous coat separate with more facility in other morbid states of the stomach. The mucous coat of the duodenum, as far as its second curvature, presented an appearance similar to that of the stomach, but less strongly marked. The jejunum, and other intestines, were of the natural appearance. The liver and spleen presented nothing particular. We were not permitted to examine the head."

Cases of Fracture of the Neck of the Femur, illustrated by Dissections. By A. COLLES, M.D. one of the Professors of Anatomy and Surgery in the Royal College of Surgeons in Ireland, &c. &c.

We shall transcribe some of the cases, which comprise the more general observations made by Dr. Colles on this subject.

"*No.* I.—This was an old man, whose body was brought to the theatre of the College of Surgeons for dissection. We were totally unacquainted with the history of the fracture, which was found in the left femur.

"The capsular ligament was remarkably increased in thickness and in closeness of texture. The fracture had taken place in the neck of the bone, near to the trochanter, but still within the capsular ligament.

"The fractured surface of the upper piece exhibited many spots apparently covered with a cartilaginous incrustation: these appearances, on a more close examination, were found to be owing to the conversion of small portions of the bone into a substance resembling ivory. The lower fractured surface, widely expanded, was formed into a sort of cup, as if the bone had been rendered soft, and, while in that state, had been acted upon by the upper piece, which was pressed on it by the weight of the body. One part of the edge of this cup-like surface was formed of two pretty large fragments of bone, which were closely connected to it by a strong ligamentous substance.

"The round head of the bone was retained in the acetabulum by the ligamentum teres, which remained entire. The cartilaginous incrustation of its head was deficient in two or three small patches, and here the bony structure was uncovered. On the edge of one of these spots was a raised part, as if a small fragment had formerly been broken off, and had adhered to the bone, without returning perfectly to its former level.

"No intermediate substance held the fractured surfaces in apposition, each being connected with the capsular ligament by very strong ligamentous bands, which passed from the internal surface of the capsule to almost every point of the outer surface of the fractured pieces. Hence it is obvious that no effort of nature had been made to create a re-union between the two pieces of the fracture, and that the stability of the limb had depended upon the strength of those ligamentous bands by which each piece was connected with the capsular ligament of the joint, aided, no doubt, by the extraordinary thickness which the capsule had acquired.

"*No.* III.—The following appearances were observed in the left thigh of a female subject, brought into the dissecting-room of the College of Surgeons, March 1818.

"The left thigh-bone was fractured transversely, and on a level with the brim of the acetabulum. Two strong ligamentous bands, one arising from the edge of the acetabulum, and the other from the internal surface of the capsular ligament, stretched across to the broken surface of the head of the bone, and seemed as if they had assisted the round ligament in confining the head in the socket. The head of the bone was perfectly sound, as was the ligamentum teres.

"The two surfaces of the fracture anteriorly admitted of a separation from each other to the extent of an inch, having at this part no other connexion than two or three tendinous bands, nearly an inch long, and very distant from each other. Posteriorly, these surfaces were united together by a very strong ligamentous substance, which was so connected with the capsular ligament, that it appeared as if it were formed by the ligament sending a thick production across between the fractured surfaces. At this place the capsular ligament did not morbidly adhere to the neck of the thigh-bone.

"The neck of the femur was evidently shortened, the lower surface of the fracture appearing expanded, as if it had yielded to the pressure of great weight.

"The broken surface of the head had occasionally moved on the shaft of the femur, as low down as the small trochanter.

"*No.* VII.—The fracture was transverse, and close to the head of the femur. The capsular ligament was very much thickened, and its internal surface coated with coagulated lymph. The fracture, however, was incomplete; for the external bony coating of the neck of the femur remained unbroken for nearly half the circumference of the bone at its posterior part, and was reduced to the softness and whiteness of cartilage. To the internal surface of this unbroken portion adhered many bony fragments of different sizes, which, by the violence of the fracture, appeared to have been torn away from the reticular substance of the bone, retaining their connexion with this coating. Along the anterior part of the fracture, where the external coating had been broken, we found its torn edges projecting beyond the fractured surface, in some places to a height of a quarter of an inch, in others less, and all those projecting portions reduced to the softness of a membrane.

"At that part of the head of the femur, which in the ordinary position would correspond with the posterior origin of the rectus femoris, a portion of bone appeared to be wanting. Whether this had been caused by a splintering of bone, or had been produced by some process which took place after the fracture, is uncertain; but I am disposed to ascribe it to the former, for still higher up on the bone was an appearance of a fissure. All this part, from which it may be supposed the splinter was detached, was covered by a thick and vascular membrane, extending from the fissure down to the edge of the fracture, so that little more than the mere edge presented a bare surface; the capsular ligament corresponding with this surface was very much

thickened. Near the centre of the fractured surface of the upper piece, a small portion of very solid bone appeared, as if it had been forcibly driven into the cancellated structure of this part of the bone. The round ligament was highly vascular and inflamed. Scarcely any vestige of a membranous texture could be discovered on the broken surface of the upper piece; the corresponding surface of the lower piece was only in some places covered with a membrane.

"*No.* X.—This bone was found in an adult subject, whose body was brought into the dissecting-room.

"A vertical section of the bone presented the following appearances: The head perfectly healthy and natural; the angle formed by the neck and shaft of the bone differed very little from the natural angle. The neck, of full length, was laid across the extremity of the shaft in such a manner, that the fractured end of the upper solid plate of the neck lay in contact with the end of the external plate of the shaft; while the lower solid wall of the neck passed to almost midway within the canal of the shaft: this lower wall had lost considerably of its compact texture, as if resolving itself into large cancelli. The medullary canal at this place was crossed by a partition of solid bone, on which the extremity of the neck rested. Immediately below this transverse bony partition, the medullary canal appeared destitute of cancellated structure, and extremely vascular, as far as its cavity was exposed.

"A thin blue layer of a substance intermediate between ligament and cartilage, was everywhere interposed between the neck and shaft of the bone, and also between the neck and the new irregular bony masses. A similar bluish cartilaginous substance was also interposed between the different portions of the irregular masses.

"The neck of the bone retained its full length and size. After maceration, it appeared that the periosteum of the neck remained unaltered.

Amongst the remarks and conclusions of Dr. Colles on this subject, he observes,

"The circumstances which I found common to all these fractures were, that the capsular ligament was not lacerated, (except, perhaps, in No. 5.) Hence may be inferred the fallacy of Sabatier's reasoning, in ascribing the pain which is occasioned by moving the fractured limb to the friction of the broken surface against the flesh *(chairs)* in its vicinity. In every instance I remarked the increased thickness of the capsule. It is curious that, although this membrane exhibited in eleven cases such manifest proofs of previous inflammation, yet in none of them could we discover any adhesion between it and the outer surface of the neck of the bone."

We would inform such of our readers as may not be well acquainted with the idiom of the French language, that the word *chairs* (plural) is used precisely in the same sense as we employ the expression "*the soft parts;*" and therefore the critical remark of Dr. Colles on the opinions of Professor Sabatier is not well-founded.

Observations on the Operation for Artificial Pupil, illustrated by Cases and Engravings. By E. RYAN, M.D. Senior Surgeon to the Kilkenny County Hospital, &c.

The remarks contained in this paper are deduced from extensive experience and apparent accuracy of observation, and appear to be judicious and well-founded; but, as the subject is not generally interesting, we shall not enter into a particular consideration of them.

On closing this volume, we observe, that, being principally composed of histories of facts, but little interspersed with arguments, the remarks of the critic must be nearly confined to such as relate to the estimation of the value of those facts: the transcriptions we have given from it will show that we recognise in it much very valuable matter; but the proportion of common-place observations which it also contains, shows that a more severe selection on the part of the editors will be necessary to preserve to the work the high character it has justly acquired.

Cases of Hydrophobia. By GEORGE PINCKARD, M.D. Deputy Inspector-General of Hospitals to his Majesty's Forces; Physician to the Bloomsbury Dispensary, the London Female Penitentiary, &c. &c. 8vo. pp. 38. Callow, 1819.

We shall introduce this work to our readers by the words of the author in the preface: he says,

"Amidst the conflicting opinions of the medical world, respecting the nature and treatment of a disease so ill-understood, so uniformly fatal, and (comparatively) so seldom witnessed, as hydrophobia, it were to be wished that physicians felt it a duty to record every case which presented itself to their observation.

"Under this impression I noted minutely the occurrences in a case which was lately brought under my care at Battle-bridge, intending to give them to the public through the medium of some periodical work. But it has been suggested to me, that, as three other cases* of this untractable disease have fallen under my observation at different periods, it might be more satisfactory to collect them together, and publish them all under the same cover.

"Adopting this suggestion, I shall content myself with plainly narrating the history of the several cases, leaving the reader to draw such conclusions as the circumstances may seem to warrant.

"At present I am inclined to believe, that all the curative means which have been tried are equally inefficacious: still, by publishing the cases which occur, facts may be developed which may lead to a better knowledge of the disorder; and it is reasonable to hope, that,

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* These were published at different times in the *London Medical Journal*.

whatever contributes towards establishing the true character of the disease, brings us nearer to the discovery of a remedy.

"One fact of high importance may be remarked in the case of Mr. Hubbard: that the disease supervened, notwithstanding the free application of caustic to the wound, within less than twenty-four hours after it was inflicted; whence it appears that each moment of delay is fraught with extreme hazard; and that in every instance the sovereign preventive, a complete excision of the part, or the most perfect destruction by caustic† or the actual cautery, should be effected as speedily as possible."

These sentiments will be echoed by every true physician; and the zeal of the author to promote the elucidation of the malady to which they relate, must be generally applauded. We have not, it is true, hitherto acquired any precise etiological knowledge of it, but we must not therefore suffer our hopes to be depressed: that of tetanus was, until a few years since, as little known; but, by pursuing the course of which Dr. Pinckard has here given so good an example, that of tracing, accurately, a description of the morbid phenomena during life, and the physical appearances after death, in all cases, whether or not any thing novel or peculiar might be obvious in them, the nature of the latter disease has at length been ascertained.

We regret to find that some cases of hydrophobia have recently occurred, of which histories have not been published by the medical attendants; and still more so, that examination of the dead bodies has yet oftener not been made. Permission to effect this should be urged in every instance, and we would on this point offer one suggestion,—that the centres of the ganglionic system of nerves, especially the cœliac plexus, be accurately examined. Reasoning by induction from the symptoms, we are led to suspect that a morbid state of this part of the nervous system is a chief, if not an essential, cause in the production of the phenomena witnessed in this disease; and no notice is taken of the state of it in any of the cases on record.

The histories of Dr. Pinckard must be considered of much value, being related with perspicuity, and deduced from comprehensive views. If we ever discover the primary morbid lesion, the advantage of possessing such histories as these will then be more clearly apparent: we shall probably find every remark in them illustrative of the nature and progressive development of the train of phenomena evinced in this malady.

† To insure an effectual application of the caustic to every part of the wound, might it not be advisable to use it in a liquid form, such as the muriatic, nitric, or sulphuric, acid?

CRITICAL ANALYSIS

OF

RECENT PUBLICATIONS, IN THE DIFFERENT BRANCHES OF MEDICINE AND SURGERY;

SELECT MEMOIRS, AND HISTORIES OF CASES;

In the Literature of Foreign Nations.

Πατρίδες ἄρα
Ανδράσιν, ὲ πατραῖς ἄνδρες, ἀγαλλόμεθα.

An Essay on the Means of lessening Pain, and facilitating certain Cases of difficult Parturition. By W. P. DEWEES, M.D. Lecturer on Midwifery in Philadelphia, &c. 8vo. pp. 156. Dobson and Son, Philadelphia, 1819; with the epigraph,

——ut si
Cœcus iter monstrare velit.—HOR.

THE title of this work is the most interesting one that can be given to a medical essay. What can more certainly and forcibly engage the attention of every physician, than a dissertation on the means of lessening the pain and danger of child-birth? The fatality of this state, although not so extensive at present as it was a century or two since, when it was chiefly superintended by female practitioners, is still dreadful. Every attempt, therefore, to lessen its danger, either by a relation of the results of fortunate experience, or by speculative reasoning, must be respectively received with the warmest gratification, and examined with the most assiduous care; though it must be acknowledged that the practice of medicine has not often been directly benefitted by prolusions of the latter kind. The essay of Dr. Dewees comprises matter possessing both of the above characters.

Before we enter into the consideration of the author's view of the proximate causes of the pain and danger of child-birth peculiar to women of civilized life, let us, since speculations on it are now to be indulged, adduce a sketch of that which we have ourselves taken of this subject; not from slight and casual consideration, but from repeated and serious attention.

On contemplating the natural history of man, through his various degrees of intellectual cultivation, from the *Papous* to the most civilized nations of the temperate climates of Europe, we see a progressive increase in the pain and suffering of the female in the act of parturition. Amongst the former, the mother, after the expulsion of her infant without a sigh or a groan, rises to go and bathe it in a neighbouring stream, and immediately assumes her ordinary and active habits of life: in the latter, parturition is an act of long and dangerous suffering, and is fatal to the life of at least one in fifty of those who undergo its pains.

This difference is not chiefly dependant on diversity of anatomical structure; for we find that civilized tribes of a certain race of people

suffer the dangers to which we have just alluded; whilst other tribes of the same race, remaining in the state of barbarism, encounter the act of parturition without either grief or fear, although no remarkable difference of formation is evident. This is witnessed in the Tartars and in the Chinese. In the ruder tribes of the former, the female joins the progress of her horde immediately after delivery; whilst the sufferings of the latter on the same occasion are hardly inferior to those of the most delicate European. The Chinese husband may now take to his bed on the birth of his child, but he does not find his wife able to attend on him with the pampering luxuries he then, from custom, may require. It is common at present, in some of the more retired parts of Ireland, for the women who dwell in huts formed only of stone-walls, a thatched-roof, and a door; in which the only furniture is an iron pot, a few knives, and some wooden bowls; containing neither chair, table, bed, nor altar of the Penates;—and who, passing their lives with so little about them to excite variety of ideas, are in such a state of non-intellectuality, that they seem to be guided by what in brutes is termed pure instinct;—it is common for those females to appear without their cabins within a few hours after their delivery, which they have quietly undergone, without fear and without trouble. But, is it thus with those of their countrywomen who inspired their own Anacreon with those ideas of sentimental refinement that are the acmé of human feeling?

It is not, then, to anatomical formation, but to physiology, that we must look for the explanation of this phenomenon.

An ancient philosopher, whose profound wisdom is often rendered obscure by the metaphorical manner in which he expressed his sentiments, seems to have attributed the sorrow of child-birth to the changes effected in women by unrestrained indulgence of the passions, and intellectual cultivation. To this explanation we can only add a few illustrative observations.

It is ascertained that the ganglionic system of nerves supplies the parts subservient to organic life, in which may be included those appropriate to the re-production of the species, with the sensibility necessary for the execution of their functions: excitement of this sensibility is not directly perceived by the sensorium, or, as the French physiologists expressively term it, the *moi*, so as to give rise directly to either pain or pleasure. Thus, notwithstanding the delicate sensibility of the stomach, the digestion of the food is not attended with conscious perception. When this does take place, from the functions of organic or nutritive life, it is because, from inordinate impressions, the sensorium is also excited. Sometimes impressions on the brain are also made by the ganglionic system of nerves, that induce volition without either pain or pleasure, (or it is so slight, perhaps from habit, as not to be very forcible,) as in the expulsion of the urine and fæces.

Excitement of the cerebral system and an effort of volition, appear to be necessary, in persons subservient to our habits of civilized life, for the expulsion of the contents of several of the reservoirs of the excretory matters of the body: it is evident with respect to the bladder

and rectum; for, in some cases of apoplexy and palsy, when all the functions of organic life, especially digestion, chylification, and the secretion of the urine, are carried on with the ordinary vigour, retention of the urine and fæces will take place, not from any inordinate material obstruction, but because the sensorium is not excited to direct the act of volition to aid in their expulsion. That the same excitement of the sensorium is necessary to procure the expulsion of the fœtus from the uterus, seems to be evident; but this is effected in the savage, as well as in wild brute animals, with but little or no pain, any more than the evacuation of the fæces.

It may be doubted whether or not this excitement of the cerebral system in the cases above mentioned, occurs in the savage; that is, whether or not it be a natural law in the animal economy; since the urine and fæces are sometimes evacuated during sleep, without dreaming, by children; and uterine action is known to go on in parturient women during sleep, (it should be here observed, that this is not accompanied with any action of the abdominal muscles,) and fœtuses have been expelled from the uterus after the cessation of the functions of animal or relative life. This question does not affect our explanation, since such a connexion of cerebral with ganglionic nervous energy does take place in ordinary circumstances in civilized life; and if it be not a primitive natural law, the influence of the cause of the pains of child-birth we are about to designate, is only the more forcibly shown. This is the inordinate sympathy and synenergy that civilization has produced between the nervous systems of organic and of relative animal life. Impressions on the former of these, that produce but little excitement of the latter in the savage, or one whose intellectual faculties have not been much developed, cause intense suffering and action in persons whose cerebral system has acquired that superiority in the human economy, which is produced by our habits of society and our mental cultivation. This is evident in a multitude of facts. It may here be sufficient to point out the extreme bodily injury savages will undergo, without showing signs of much pain, and their almost absolute freedom from insanity; whilst a little disorder of the stomach or liver, in persons in a state of civilization, especially those in whom this is carried to the greatest degree of refinement, will frequently be productive of mania.

Applying this principle to parturition, we would say, that the call made by the uterus in that act on the cerebral system, which in the savage is either not experienced, or so slightly perceived as only to cause an effort with no more sensation of pain than what ordinarily takes place in the expulsion of the fæces, produces in the woman of civilized life, in whom indulgence of the passions and intellectual cultivation have caused an inordinate development of cerebral energy, the pain and other serious accidents they so generally endure.

This, then, is the view we are disposed to take of this phenomenon: could we indulge in a more detailed explanation, it might be rendered more apparently correct; but we are contented with pointing out to others what we believe to be an interesting course of enquiry, and one that, if pursued, might perhaps lead to some useful results. Before

we conclude, it may be useful to observe, that these notions are powerfully supported by the observations of Mr. POWER; whilst they seem, in return, to elucidate the view he has taken of the same subject.

We will now consider the essay of Dr. DEWEES; and, in the first place, the explanation he advances of the same phenomenon. He commences with remarking, that a change has obviously taken place in civilized life, by which parturition is rendered an act of difficulty and danger; and he states his object in this essay to be, "to show in what some of these changes consist, and how to ameliorate them."

The causes of difficult and painful labours, he continues to remark, may be divided into two general heads: those arising from some imperfection of the pelvis, and those which interrupt the natural and healthy functions of the soft parts. It is to the latter which his attention in this essay is confined.

The author, in the first instance, gives a brief account of the opinions of Dr. HUNTER, MALPIGHI, and RUYSCH, respecting the arrangement of the muscular fibres of the uterus, notices their discrepancy, and then observes, that the correctness of neither of those descriptions has been satisfactorily proved. Since then, he continues, "anatomists have never been able with their knife to clear up this point, we must have recourse to other means to satisfy ourselves: the only certain one, it appears to me, is, to deduce them from the actions of the uterus itself; this at least warrants two distinct sets, the one circular, the other longitudinal."

This, it must be well known, was the opinion of VESALIUS, though he also supposed the existence of transverse fibres.

The basis of the arguments of Dr. Dewees is by no means a valid one for such a deduction, and will not be so admitted at the present time, when physiologists are not disposed to limit the property of contractibility to muscular fibres; and it is not well ascertained that the chief actions of the uterus are expressly longitudinal, and transverse or circular. Many observations, especially those made when the placenta has been attached to unusual parts of the uterus, and when there has been two or three children in it at the same time, seem to show that, like the stomach, it performs numerous varieties of action, according as it is irritated in one part or in another. Such actions are shown to take place in the stomach by the expulsion of substances from it, by vomiting, that are not adapted for digestion, whilst alimentary matter is retained.*

Let us for a time, however, admit of the supposition of Dr. Dewees, since the establishment of this forms the basis of his dissertation; and, if we do not acknowledge it, we cannot readily proceed with him in his enquiry.

Taking for granted, then, the existence of longitudinal and transverse muscular fibres in the uterus, the author next proceeds to state, that "he cannot help regarding the neck of the uterus as a distinct and independant part from the body and fundus, and as having its

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* See our review of Dr. LALLEMAND's Thesis in the fortieth volume of this Journal. Many curious facts of this kind are there noticed.

own peculiar laws and actions; and that this separation of powers is absolutely necessary to the explanation of some of the phenomena exhibited by health and disease, and the influence of certain agents on these parts.

This susceptibility to diseased action cannot be well disputed, and is indeed generally admitted. Dr. Dewees next adduces a statement of all the circumstances, which he considers most concur to produce parturition with the greatest possible regularity. These are,

"First, there must be a subsiding of the abdominal tumor; and, if at this time a finger be introduced through the os tincæ, we shall find the membranes alternately tense and relaxed: these circumstances are owing to the uterus now beginning to contract, and forcing the presenting part into the pelvis.

"Secondly, there must be a secretion of mucus from the vagina: in some instances this flows from it, several days previous to the onset of pains; but, for the most part, it only happens a few hours before they are felt. This mucus is secreted from the surface of the vagina, and perhaps from a portion of the neck of the uterus. Why these glands are excited to this duty may perhaps be difficult to explain, but their action appears intimately connected with a certain state or condition of the os tincæ: thus we find, *cæteris paribus*, this secretion to be most abundant where there is the greatest disposition in the mouth of the uterus to dilate or relax; and with this is connected the same disposition of the perinæum. It must be observed, that the secretion here spoken of must not be confounded with leucorrhœa, as this discharge is by no means favourable to this effect.

"Thirdly, the mouth of the uterus must yield easily, that the contractions of the body and fundus may not be exerted for too long a time unavailingly. The dilatation of the mouth of the uterus, when best performed, is either before or very quickly after the painful contractions of the uterus have taken place: this, in general, is done without the mechanical aid of the contents of the uterus.

"Fourthly, the body and fundus must contract with sufficient force, to make the child pass through the pelvis.

"Fifthly, the perineum must unfold without much or any mechanical force, that the child may not be detained in passing through the os externum.

"Sixthly, there must obtain between the fœtus and pelvis a proper proportion, and the former must be well situated, that it may derive every advantage from the circumstances just enumerated."

In his observations on the dilatation of the orifice of the uterus, we meet with nothing either novel or particularly remarkable: his chief object is to show that, "in the most natural and favourable cases of labour, the mechanical power of the ovum has no influence in dilating the mouth of the uterus." This is generally admitted, and Dr. Dewees might have spared his disquisition on the description of Baudelque; for that author, in his own language, advances the same doctrine. He next considers "*the different kinds of contraction of the uterus.*"

"First, the longitudinal contraction: this is performed by the fibres

of the uterus, so called, or those fibres which run from the fundus to the neck; it serves to shorten the uterus in the direction of these fibres; consequently, to expose its contents more and more, by making them approximate the mouth; and this will be in proportion to the diminution of resistance at this part, and the force with which these fibres may act.

"The circular contraction. This action is performed by the fibres so named; they, as it were, run round the uterus, commencing at the fundus, and terminating in the circle forming the neck: they tend to diminish the capacity of the uterus in the direction of its transverse diameter; consequently, have little or no immediate agency in expelling its contents.

"The simple contraction, or when either of these sets of fibres act separately, as, before labour especially, when the finger is introduced through the os tincæ, we find the membranes alternately tense and relaxed. In this case, we presume, the longitudinal fibres act alone, as there is no stiffening of the circle forming the mouth; or, as when the waters have been evacuated, the uterus is made to embrace its contents, and no pain for a long time is produced: we suppose, in this instance, the circular fibres act alone, as there is no effort to expel the contents of the uterus, which would not be the case did the longitudinal fibres co-operate with them.

"Compound contraction, or when both sets of fibres act. Their united action is proved, we conceive, when there is a hardening of the mouth of the uterus, and an evident depression of this viscus, with its contents, into the lower part of the pelvis.

"Tonic contraction. By this we understand that uniform action which the uterus exerts to reduce itself to its original size: this appears to be the effect of all the fibres folding themselves up after the distracting cause is removed.

"The spasmodic, or that contraction of the uterus which is for the most part accompanied with pain. It must be remembered, however, that pain does not necessarily belong to this species of contraction, since some women are delivered without it. We should therefore, agreeably to this fact, rather call this species the alternate contraction of the uterus, as it has a greater or less interval between each contraction. When this action is best performed, it is, we presume, chiefly by the longitudinal fibres.

"It may here become a question," continues the author, "how are the fibres of the uterus enabled to perform this alternate contraction? since we know that a muscle, after having contracted, cannot repeat that contraction, without being first relaxed, and then elongated." We shall not follow him in his remarks on this point; it has no direct connexion with the question under consideration, and we are desirous to give as clear and direct an exposition of his arguments in favour of his hypothesis, as his desultory manner will permit. It should be remembered, that the existence of muscular fibres in the uterus is not determined; that membranous contraction will proceed without intervals of relaxation; and that the *tonic* and *spasmodic* mode of action, which the author enumerates, seem, with the aid of the abdo-

minal muscles, sufficient to explain all the consequences observed in the mechanism of the act of parturition.

The author then considers "*the relative strength of the different sets of fibres:*" he says,

"We have already observed, that the longitudinal fibres were stronger than the circular: our reasons for thinking so are,

"First, that, were they of equal strength in all parts of the uterus, delivery could not take place, since the circular fibres would embrace the body of the child, and thus retain it; their action being, as we have already said, to diminish the uterus only in its transverse diameter, consequently, is at right angles with the longitudinal.

"Secondly, that, when from any circumstance the power of the circular fibres is increased, either absolutely or relatively, there the labour does not advance; therefore, the circular fibres are not to be considered as directly instrumental in expelling the child.

"Thirdly, as the circular fibres, from the direction of their action, do not immediately contribute to the advancement of the child, they must be considered as the weakest set, since delivery takes place without their direct aid: the longitudinal fibres have then not only to move the child, but overcome their resistance.*

"Now, let us apply these facts to the explanation of the dilatation of the uterus and the progress of labour.

"When the woman has carried her child to the full time of gestation, that process termed labour must ensue, that she may be enabled to part with it; for this purpose one part of the uterus must yield or dilate, while another must contract. The uterus is closed at bottom, and maintained in that situation by the contraction of the muscular fibres of its mouth; but these must relax, that the child may effect its escape. We must therefore regard the circular and longitudinal planes of fibres, as a kind of antagonist muscles to each other. The longitudinal fibres yield more willingly to impulse from within the uterus than the circular during gestation, owing perhaps to their greater length, or perhaps greater laxity:† they continue to yield until they are so much upon the stretch as to induce a disposition to contract; this they eventually do. The circular fibres, on the other hand, from their greater rigidity, most probably are put immediately upon the stretch: they therefore have a constant stimulus to excite their contraction; hence the mouth of the uterus keeping closed. But, so soon as the longitudinal fibres become uneasy, from distention, they become refractory, and will yield no more without resistance; they then contract, and continue to do so until the stimulus of distention becomes still more powerful, which eventually brings on the period of labour. By the contraction of the longitudinal fibres the length of the uterus diminishes: this puts the circular upon the stretch, since the uterus

* This is particularly the case in the instances where the membranes are prematurely ruptured: the uterus, by virtue of its tonic contraction, accommodates itself to the various inequalities presented by the child's body, and some of these are eminently calculated to retard labour; yet the longitudinal fibres overcome them.

† Hence perhaps the lengthened form of the uterus.

cannot diminish in one direction, while the mouth of the uterus remains shut, without augmenting in another; therefore, the circular fibres are a little distracted, and they immediately co-operate with the longitudinal, and force the uterus, with its contents, lower into the pelvis. In this instance, what we have termed the compound action of the fibres, takes place: this is proved by the edges of the mouth of the uterus stiffening during the contraction.

"This kind of action is reciprocated for some time, but the circular fibres eventually yield to the influence of the longitudinal; first, from their having expended a portion of their power in maintaining a state of contraction so long; and, secondly, their being absolutely the weaker fibre. Hence the circular fibres which constitute the neck relax, and hence the dilatation of the mouth of the uterus."

After some adventitious remarks on the secretion of mucus, and the yielding of the external parts, the author proceeds to treat of "*the contraction of the fundus and body of the uterus.*" We wholly transcribe his observations on this subject.

"That the uterus may be enabled to expel its contents, as we have already said, the fundus and body must contract, while the mouth must relax. We have endeavoured to show how the latter was effected; let us now, for a moment, attend to what must be done by the fundus and body, that delivery may take place.

"When the mouth of the uterus is sufficiently dilated to allow the child to pass through it, the fundus and body must continue to contract: this contraction is of two kinds, namely, the tonic, and the spasmodic or alternate. The tonic contraction is chiefly performed by the circular fibres: by this contraction the whole of the internal surface of the uterus is applied to the body to be moved, and the longitudinal fibres, by this means, are brought more closely into contact with it, and of course are enabled to act with more effect. This perhaps is the chief use of the circular fibres at this period of labour; as they do not, in any instance, directly contribute to the advancement of the child, as we have already observed, and shall now endeavour to prove more fully.

"We shall relate some circumstances attending the contraction of the uterus, which will deserve notice, and to the truth of which every accoucheur will bear testimony.

"First, that a considerable degree of contraction may take place in the circular fibres without producing pain: thus, after the evacuation of the waters, and the uterus is closely applied to the body of the child, even to a degree that would render turning impracticable, yet no pain is felt.

"Secondly, when this contraction is violent, it throws the uterus into inequalities, and sometimes divides it like an hour-glass: this obtains in a degree before the birth of the child, but more especially after it, and before the expulsion of the placenta. In these instances the contraction is obstinately maintained, but no pain is felt.

"Thirdly, if the finger be applied to the presenting part during the continuance of this contraction, it is not found to advance.

"Fourthly, when this constriction is most violent, the longitudinal

fibres act, for the most part, with more force; since they are not only obliged to effect the delivery, but also to overcome this additional resistance: another proof of their superior strength.

"Fifthly, this stricture continues without any intermission, as far as we can determine, for hours; but this does not suspend the painful and alternate contractions of the other fibres, nor does this constriction relax during this alternate contraction; therefore much time is lost, and much pain endured, from this circumstance: it however yields eventually, and from the same cause and in the same manner as the mouth of the uterus does at the commencement of labour.

"Sixthly, when the painful contractions take place, the presenting part is pushed lower into the pelvis; but, when this ceases, it most frequently recedes a little.

"From these facts, the following inferences, we think, are deducible.

"First, that the circular fibres may contract to almost any degree, without being attended with pain.

"Secondly, that their contraction alone, however violent, does not forward the child.

"Thirdly, that they do not possess the power of alternate contraction in the same degree as the longitudinal fibres; and, that they may exert this power, it is necessary at first to have them distracted by some force or other.

"Fourthly, that the pain felt during labour must, in a great measure, if not entirely, depend upon the contraction of the longitudinal fibres.

"Fifthly, that the changes the uterus has suffered from civilization and refinement, must be chiefly confined to its longitudinal fibres.

"From what has been said, then, the spasmodic or alternate contraction of the uterus appears to be nothing more than an increased effort it makes to overcome the obstacles opposed to its progress to a state of vacuity; and that the pain attending these contractions depend upon certain physical changes which the longitudinal fibres have undergone from the causes just mentioned. Why a particular set or given direction of fibres should have suffered more than another, may be impossible to determine; but that they have, we believe to be most certain. This change, however, is by no means confined to the uterus, as every straight muscle of the body appears to have participated with it; since it is admitted that the man of the civilized world has lost much of his original strength. On the other hand, the circular muscles, as far as we can determine, have lost nothing of their primitive power; since it is more than probable that the various sphincters,* among which we may reckon the circular fibres of the mouth of the uterus, perform their duty as effectually and as powerfully as in the time of our first parents.

"Do not these facts emphatically account for women, who have suffered these changes, having more tedious and painful labours than those who have not undergone them? as the women of savage nations, the women of Calabria, &c. and without the necessity of having re-

* The heart, or intestines, may also be included.

course to a physical necessity, derived from the erect position of man, or the peculiar construction of the pelvis?"*

All the postulates in the foregoing arguments are mere suppositions, not rendered at all probable by precise observations. The only facts that seem to be well established are these, that the uterus may be partially excited to contraction, which contraction does not so well tend to expel its contents as that which occurs when it wholly embraces them, as the hand does a ball; and that a certain degree of contraction may take place in it, and that not to be easily overcome, without producing pain: in this case, it seems, the cerebral system is not excited, for no action takes place in the abdominal muscles, which always occurs when that is excited; and it is therefore easy to understand why, during this partial and merely *tonic contractility*, but little or nothing is done towards the expulsion of the fœtus. Whether a particular and direct longitudinal action of the uterus ever takes place, and, if so, if it be always accompanied with pain, remains to be decided; and, we repeat, the author has not rendered his assertion at all probable. What he considers as the expressly longitudinal action of the uterus, is, very likely, merely a continuous grasp of the whole organ, which, through the medium of the cerebral nerves, produces a concurrent action of the abdominal muscles, and is thus so particularly efficacious in forwarding the progress of the fœtus. The reason why the fœtus recedes a little on the cessation of this "*longitudinal action,*" is, that the abdominal muscles have ceased to act, as well as perhaps, in some measure, the uterus.

The conclusion which the author draws from all these pure suppositions, is not a little singular, and his corollaries to prove it are not correct. We have no evidence of the existence of that want of balance between the longitudinal and circular muscles of the body; and our women who are engaged in active exertions,—for instance, the stout and hardy Welsh women who visit the markets in the midland counties of England with their agricultural produce,—are much stronger than most female savages; whilst they suffer as severely during labour as any whose minds are equally cultivated by social intercourse. But, we suppose, the patience of our readers must be exhausted ere this, at seeing medicine so sported with, by having visionary data, inaccurate arguments, and almost ludicrous deductions, intruded in the place of that logic, which this science has at length effectually claimed, and which every judicious physician is disposed to revere.

The author, after this, treats the subject of difficult parturition in a more practical manner. But, as we do not comprehend his principles, we shall not enter on the consideration of the application of them. Every thing is reduced to "*rigidity.*" He says,

"The cause of pain and difficulty, for the most part, depends upon a certain condition of the soft parts that are subservient to labour; we shall therefore consider this subject under the following heads:

"First, where rigidity of the mouth of the uterus depends on the circular fibres maintaining their contraction for too long a time, but where no inflammation attends.

* See Osborne's *Essays*; also *Med. Mus.* vol. i. p. 270.

"Secondly, where the rigidity is attended with inflammation.

"Thirdly, where the rigidity arises from previous local injury, either from mechanical violence, or from inflammation, and its consequences.

"Fourthly, relative rigidity, or where it proceeds from disproportionate powers between the longitudinal and circular fibres.

"Fifthly, tonic rigidity, or where the circular fibres remote from the mouth embrace the body of the child too powerfully."

The remedial measures which the author examines the efficacy of, are opium, the warm bath, and blood-letting. On these subjects he does not appear to us to have advanced any remark of particular novelty, except the inculcating a very free use of blood-letting to alleviate this *rigidity*. The work terminates with some observations on the efficacy of ergot (the *secale cornutum*) in cases of "*difficulty from want of force in the uterus*," &c. We shall not now dwell on this subject, since this remedy in general, and his opinions respecting its use, have been already noticed at length in various parts of this Journal.

A Memoir on Inflammation of the Veins. By G. Breschet, M.D. Prosector to the Faculty of Medicine of Paris.

(*Continued from p. 166.*)

We have now to adduce the general conclusions of M. Breschet on the pathology of inflammation of the veins, and the appropriate measures for the relief of that disease. As these consist of observations rather than opinions, and are drawn up in a concise and perspicuous manner, we shall give them in detail, and without any particular remarks, as the accuracy of the author's descriptions, and the utility of his labours, must be sufficiently apparent. Dr. Breschet observes, that

"Inflammation of the veins may be either idiopathic, sympathetic, symptomatic, or metastatic.

"*Physiological characters of inflammation of the veins.*—The signs of inflammation of the veins are not always easily recognized; particularly if the inflammation is seated in the small vessels, or even in the trunks, when they are situated in the visceral cavities.

"1°. *Local characters.*—The consideration of the precursory circumstances; pain in the course of the veins; swelling of the adjacent cellular tissue; sometimes redness and tension of the skin; its sensibility and shining appearance in the passage of the vein; and afterwards a knotty, tense, and painful cord, in the particular direction of the vessel; are the most ordinary phenomena of this inflammation. If a wound exists, there may be an evacuation of blood altered from its usual appearance, or of pus more or less thick in consistence, from the orifice of the vein. In the latter case, soon after the lesion of the vessel was effected, there is pain in the wound; swelling comes on; the wound does not unite by the first intention, its edges become hard; or, if it has cicatrized, an abscess forms under the cicatrix, and soon destroys its continuity. The pains which occur in the course of the

inflamed vessel are more particularly directed towards the heart than towards the extremities; they are augmented by pressure, and they have sometimes been supposed to be rheumatic. A sensation of burning heat follows exactly the same direction as the pain.

"2°. *General characters.*—It is rare that inflammation of a vein, especially if it has existed some time, is not accompanied with disturbance of the system, or a real febrile state, the intensity of which varies according to that of the inflammation, the extent of the disease, its seat, the importance of the vessel, and the tendency of the local affection to one or other mode of termination. It should be remarked, that many physicians have observed in these circumstances the phenomena of typhus; and I have myself found, in many subjects who had fallen victims to typhus, evident traces of inflammation in the encephalic veins and in the venous sinuses of the cranium. The duration of inflammation of veins is occasionally very short; most frequently, it is of rather long continuance: and it appears, from the observations of M. Fizeau, that this phlegmasia may be remittent, presenting actual paroxysms of exacerbations of the symptoms.

"Inflammation of the veins may be confounded with that of the arteries, the lymphatic vessels, or of the nerves. In the first case, the pain and the other external characters are directed from the point where the artery has been injured towards the branches of the vessel. In the second case, the pain may extend in the direction towards the heart, but the lymphatic glands swell, become painful, and the skin often presents two or three red waving lines, which appear shortly after the lesion or pricking of the vessel; and it is not long before tumefaction of the whole member takes place.

"Lastly, if the nerve be the seat of the malady, the pain is propagated from the situation of its origin to a common centre, and especially from the situation of its ramifications: it is instantaneous; it immediately follows the puncture; and this pain has varieties of character, as we observe in the neuralgiæ, which are often only chronic inflammations of the nerves.

"*Anatomical characters of inflammation of the veins.*—Inflammation of the veins may terminate in several ways. We do not possess well-authenticated facts to prove that it, in any cases, terminates in resolution; and that the vessel, being restored to its former state, executes the functions for which it was primitively adapted. Union of its parietes, obliteration of its cavity, suppuration, ulceration, and gangrene, most commonly take place. Thus, phlebitis appears under the following forms: 1°, adhesive inflammation; 2°, suppurative inflammation; 3°, ulcerative inflammation; 4°, gangrenous inflammation; 5°, eliminatory inflammation.

"1°. *Adhesive inflammation of the veins.*—John Hunter and M. Dupuytren think that adhesive inflammation may exist in veins; and it is indeed by that, that wounds of these vessels are healed in four-and-twenty or six-and-thirty hours. We must, however, distinguish the cicatrization of the external tunic of veins from that of their internal membrane: the former, when it is divided, unites in the same manner as wounds of the cellular tissue; but this is not the case with

the adherence of the internal membrane: it takes place more remotely and with more difficulty, from inflammation less readily affecting this tissue. The cicatrix of solutions of continuity of the parietes of veins remains but weak for some time, and is easily torn. Twelve or twenty-four hours after blood-letting, we can, by slight percussion or by distension, destroy the union that has been effected. It is even by these that the adhesive inflammation is changed into the suppurative, and is propagated to a greater or less extent in the cavity of the veins, and sometimes to the heart.

"John Hunter, however, considered the adhesive inflammation of veins as a mean of arresting the progress of the inflammation; and he says, that, by compression excited on the sides of the veins, we may cause them to adhere, and limit the extent of the disease, by preventing the pus formed below the adherence extending further towards the heart. Mr. TRAVERS believes, on the contrary, that this adhesive inflammation is rare in veins, that a considerable degree of irritation is necessary to provoke it, and that, when inflammation is developed, it passes rapidly to suppuration; or else that a large quantity of coagulable lymph is effused into the vessel, which fills up its calibre, obliterates it, and at length becomes adherent to its parietes: but here there is, properly speaking, only adhesive inflammation, only that there should not be so abundant an effusion of coagulable lymph.

"The little disposition to adhesive inflammation offered by the internal membrane of veins, seems to oppose the analogy that has been supposed to exist between that and the serous tissue.

"2°. *Suppurative inflammation.*—It is very common in veins: the greater part of the observations that we have referred to, demonstrate its existence. This species of inflammation has a great disposition to extend further and further on the affected surfaces, and the pus mingled with the blood in its circulation with the continuity of the tissues, is a powerful agent in its propagation. It is in these circumstances that the general phenomena assume their severity of character, and that the state of the patient becomes calculated to excite the most serious alarm. If the inflammation diminish, the pus, from ichorous, serous, or white and consistent, as it had been, is changed for an albuminous fluid, and secondary adherence or obliteration of the vessel is the consequence.

"3°. *Ulcerative inflammation.*—There are many authentic instances recorded of ulcerative inflammation of the veins. M. PORTAL mentions having found, in the body of a woman, an ulceration of the superior vena cava. Mr. TRAVERS cites a case, where the internal jugular vein was obliterated by the pressure of a tumor situate on the right side of the trachea, and covering the large vessels. The patient, towards the termination of his existence, had voided blood mixed with pus, by the mouth and by the anus. On dissection of the parts after death, the tumor was found to contain gangrenous cellular membrane and blood in a state of putrefaction. The internal jugular vein was filled, to a certain extent, with a coagulum of blood; but below this there was an ulceration that had established a communication with the sac of the tumor, so that the blood which came from the head passed

in part into the cyst; there was an ulceration also that had induced a communication of the cyst with the œsophagus, so that the contents of the tumor could pass into the intestinal canal.

"It has been frequently observed, that, if wounds of the veins have not united by the first intention, the suppuration that is formed either in the tunics of the vessel or in the adjacent tissues, was soon accompanied with inflammation of the edges of the wound; that the opening gradually increased in size; and that it was not rare to see the whole circumference of the vessel destroyed by this vessel, and the continuity of its canal cease to exist, by the progress of the ulceration. Lastly, many instances of ulceration of the internal membrane of veins have been observed, but without the perforation of the whole thickness of the parietes of the vessels.

"4°. *Gangrenous inflammation.*—The frequency of suppuration of veins leads to a belief that gangrene might readily affect these vessels: observation, however, demonstrates the contrary. The veins and arteries long resist the effects of the gangrene which destroys all the tissues in the midst of which they may be situated. These vessels are, however, not in a healthy state; inflammation has seized them, and an abundant quantity of albuminous matter, mingled with a little blood, fills them, obliterates the canal for a greater or less extent, and thus opposes the occurrence of hæmorrhage. At length, the vessels, isolated on all sides by the destruction of the other tissues, and no longer receiving nourishment, die by a sort of inanition; a process is set up in some point, but always below the termination of the coagulum; the part of the vessel despoiled of its adjacent parts is separated; and this inflammatory process, by which parts deprived of life are separated from others, is that which I term, after M. Dupuytren, the *eliminatory inflammation.*

"5°. *The eliminatory inflammation.*—When a ligature has been placed on a vein or an artery, it is by this eliminatory inflammation that the vessel is separated throughout the whole thickness of the line embraced by the ligature, by which this is also detached, and by which a portion of the vessel forms a real eschar. In an artery, if the ligature be not too large and is properly applied, a moderate degree of inflammation affects the vessel above and below it. A slight effusion of coagulable lymph takes place on its internal membrane, and adhesion by the first intention is the result; a coagulum of a conical figure, albuminous at its base and sanguineous at its summit, is found, near the adherence of the sides of the vessel, to oppose the effort of the blood; and, by eliminatory inflammation, the artery is gradually destroyed in the point correspondent to the ligature, which at length is detached. This happens from the tenth to the fifteenth day, if the vessel alone has been comprised in the fold of the thread, whatever may be its nature; but this is longer in taking place, if the thread does not act immediately on the vessel, and if it comprehends fibrous parts. The coagulum is not adherent to the internal membrane in the first few days; but, by an inflammation that takes place in the tissues of the vessel, it terminates by forming an adhesion.

"If any cause opposes itself to the union of the vascular parietes in

the points adjacent to the ligature, and when the coagulum is not yet adherent, hæmorrhage may occur; and, if a ligature of reserve be employed, we easily divide the whole of the parietes of the artery in a point where the coagulum does not occupy the whole calibre of the vessel, and where it consequently cannot adhere to the internal membrane. This section of the arterial parietes by a ligature of reserve is effected more promptly in proportion as the inflammation has made the tissues of the artery lose their resistance, and permit themselves to be divided like parts affected with the sebaceous degenerescence. These observations on the mode of resistance of inflamed tissues, and on the true causes of consecutive hæmorrhages, appertain to M. Dupuytren. I have often had occasion to verify their justness and importance.

"If an hæmorrhage happens a short time after a ligature has been placed on an artery, it is not immediately above the first that a second should be applied, but on a distant point, where the arterial parietes are not inflamed. Has a large ligature been applied on an artery? the section of the vascular parietes has not been effected, and union by the first intention is not effected; it is the suppurative and ulcerative inflammation that then ensues; and, when the whole thickness of the vessel has been destroyed by this process, hæmorrhage is the consequence.

"It is not exactly thus with respect to the veins. Adhesive inflammation being excited with more difficulty in these vessels, and their internal membrane not offering the same facility of division as that of arteries, adhesion by the first intention does not take place, or only with great difficulty. The facility with which the tissues of veins are distended with blood, is another unfavourable circumstance to the primitive union. A more powerful and a more durable irritation is necessary to induce inflammation of veins. Albuminous matter alone is secreted if the inflammation be moderate, or else to this secretion is joined the formation of pus if the inflammation be intense. When the inflammation extends on one of the surfaces of the vessel, either from the force of the irritation that has acted on it, or because the pus has circulated in the part of the vein which is between the ligature and the heart; and it is, without doubt, to this propagation of the inflammation, that the development of general symptoms, the severity of the disease, and often the death of the subject, is to be attributed.

"The part of the vein situate near the ligature inflames; the membranes of the vessel acquire an inordinate thickness; the canal of the vein is filled up, and to a great extent, with a concrete albuminous matter, which soon adheres to the vascular parietes, and renders the vein impervious to the blood. The ulcerative and eliminatory inflammation then divide the whole thickness of the vessel in the circular line embraced by the ligature.

"*The treatment.*—It should be directed by the same principles as that of other inflammations. We should first endeavour to ascertain its cause; and, if it has happened after venesection, determine whether or not the instrument has been broken, and the point of it left in the parieties of the vessel.

"When the inflammation is solely local, we have been advised to put a stop to it suddenly, in its commencement, by cold lotions or fomentations,—as ice and saturnine applications. When the disease is more advanced, it should be combatted by the application of leeches on the course of the affected vessel; relaxing fomentations; emollient cataplasms; oily and mucilaginous unguents; tepid baths; camphorated, opiate, and narcotic, topics.

"J. Hunter, Reil, and Mr. Abernethy, think that we should, and that we may, incite adhesive inflammation, above and below the part affected, to oppose the extension of the disease, and prevent its extending further and further up the venous trunks, and to the heart itself. This adhesion would also prevent the pus, circulating with the blood, from irritating the internal membrane of the vessel over which it might flow. From what I previously said, it will appear that we cannot depend on the effects of compression in exciting this adhesion, because it is very difficult to obtain adhesive inflammation in the veins.

"A more certain mean would be to cut the affected vein through transversely, at a certain distance from the seat of the disease, to break the continuity of the tissues, and thus oppose the propagation of the inflammation. We may conceive that this operation is practicable only in cases where the affected vein is not very large in calibre, readily accessible to instruments, and when we need not fear the wounding of an artery or an important nerve.

"Prudence requires that, in the operation of phlebotomy, we always endeavour to obtain union by the first intention of all the different parts interested; and, if new emissions of blood are desired a short time after the first, that we do not destroy the process of primitive cicatrization to obtain blood by the same opening, but that we make another in a second part, and, if it be possible, in a different vein.

"If the inflammation has terminated by suppuration, we should, without delay, open the abscess to obtain a free course for the evacuation of the purulent matter.

"Lastly, if general symptoms appear, and they are intense, we should combat them by all the means directed for the treatment of angeio-tenique (inflammatory) fever and the phlegmasiæ."—*Journal comp. du Dict. des Sciences Medicales*, tome iii.

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*An Account of the Structure of the Brain and its Appendages;** by G. Lauth, Professor to the Faculty of Medicine at Strasbourg.

[From the *Journal comp. du Dict. des Sciences Medicales*, tome iii.]

The brain, or encephalon, is the organ contained in the cavity of the cranium, termed by the ancients the superior venter. In order

* The numerous discoveries which have been made during the last twenty years, respecting the brain, including those of Gall, has rendered necessary a new description of that organ, which should comprise the discoveries of the physiologist we have named, without being subservient to his doctrines. This task has been undertaken by Prof. Lauth, and we are convinced that our readers will contemplate with much interest the results of his labours.—Edit.

to describe it completely, we shall commence, by way of prolegomena, with an examination of its envelopments, a description of its different substances, and the denomination of its vessels. We shall also indicate the modes of dissecting it, and shew the divisions which we believe best adapted to favour the embracing in one view the numerous parts of which it is composed.

§ 1. *Prolegomena. The envelopments of the brain.*—The cranium is covered externally by the hairy scalp and the muscle termed the epicranium, which furnish to this osseous vase a thin envelopment, above, in front, on its sides, and on its posterior surface. The cranium and the brain itself are, in consequence, much exposed to the intemperature of the air, to the consequences of compression, to wounds, &c. The basis of the cranium is better guarded, being turned towards the neck; it is united to it by muscles and strong membranous ligaments, and there is also much adipose tissue interspersed between these parts. The cerebral envelopments within the cranium, are the *dura-mater*, a strong, fibrous, white, and vascular, membrane, which serves at the same time for an internal pericranium, and gives out various prolongations; as, the falx, situated between the lateral parts of the brain; and the tentorium, placed between the cerebrum and cerebellum. The second membrane is the *arachnoidea*, a transparent lamina, thin and without blood-vessels, in contact with the pia mater over the whole of the surface of the brain, except at its basis, where it is a little separate from it, as well as over the spinal marrow. The *pia mater*, or the third cerebral envelopment, is a thin vascular membrane, which immediately embraces the cerebral substance, and which penetrates into its interior, either in dipping into its furrows, or in introducing itself by openings: it receives, in the last case, the name of the *plexus choroides*.

The substances of the brain.—In the embryo there is only a single cerebral substance, which, with the perfectionment of organization, is divided into two matters, distinguished by their colour and their structure. The first is *grey*, and termed the *cervical*, because it occupies the greatest part of the surface of the brain, and enters into its furrows, where it covers the lateral surfaces of its convolutions. The second is *white*, and bears the name of the *medullary* part, because it is often placed interiorly; although several organs of the brain are white on the surface and grey within. These two substances are sometimes distributed in layers, so that the external grey part is not continuous with the internal white matter.

These two substances present various shades of colour in different parts of the brain. Malacarne* long since made this remark. Not much attention has been paid to the tints of the white substance; but those which the grey presents have induced Sœmmerring† and Gennari‡ to admit a third, *yellow* substance; and a fourth, *black*. We, indeed, always find a blackish crescent in the crura of the brain; but the

* *Encefalotomia*, P. ii. No. 15.
† *De Basi Encephali*, page 63.
‡ *De peculiari Structura Cerebri*, p. 72.

yellow substance, which Sœmmering says is evident, particularly in that portion of the posterior lobe of the brain which rests on the tentorium of the cerebellum, and which ROLANDO* describes in the cerebellum, does not constantly exist, according to our own observations. There are some bodies where the deep-grey colour passes suddenly to white; we then do not perceive the yellow: in dead bodies, on the contrary, where the grey gradually becomes pale, it appears yellow before the commencement of the white colour; as VICQ-D'AZYR† also remarked. GALL‡ believes the grey substance to be diversely coloured and modified, according to the different destination of the nervous filaments which are thence derived.

The grey substance of the brain is the softest solid in the human body. We perceive in it fibres irregularly disposed, which are for the greater part blood-vessels; because it takes the colour of the matter of injections, when we have succeeded in well filling the vessels with the latter. This circumstance led RUYSCH§ to imagine, that it was entirely vascular, and not formed of follicular glands, as MALPIGHI‖ had believed. ALBINUS¶ modified the doctrine of Ruysch, saying that there existed a small quantity of grey substance incapable of being injected, interposed between the vessels, and forming the basis and the proper character of this part of the encephalic mass. The beautiful researches of PROCHASKA** shew also that, in the grey substance of the brain, as well as in all the other solid parts of the body, there is a portion which can never be injected. Anatomists have not hitherto been able to separate the grey pulp from the fibres that sustain it, probably in consequence of the softness of the latter. The grey substance, always uniform, but more vascular than the white, should be considered as the preparative organ of the latter.

The white substance does not change its tint by the nicest injections, because it does not contain a sufficient proportion of blood-vessels. It presents in almost every part a fibrous aspect, which has led to an opinion that a white fibre is the true element of its structure. This opinion corresponds with that of the ancients on the structure of the nerves, which they termed the third vascular system. They arrived by degrees to the hypothesis, that the red blood-vessels terminate, in the grey substance, in grey vessels, which themselves became white canals, composing the white substance and the nerves. This doctrine was particularly developed by BOERHAAVE.†† Modern anatomists no longer admit, it is true, a tubular structure in the white substance; but its fibrous formation appeared indubitable to HALLER,‡‡

* *Saggio sulla Vera Struttura del Cervello*, p. 24.
† *Traité d'Anatomie et de Physiol.* Pt. ix. No. 10.
‡ *Anat. et Physiol. du Cerveau*, i. 234.
§ *Thesaurus Anat.* vi. 10, 38; ix. b.
‖ *De Cortice Cerebri*, p. 1; *De Viscerum Structura*, p. 78.
¶ *Annotat. Academ.* i. 51.
** *Disquisitio Organismi Corporis Humani*, p. 103.
†† *Institut. Rei Medic.* No. 270, 274.
‡‡ *Elem. Physiol.* iv. 31.

MALACARNE,* SŒMMERING, MONRO,† VICQ-D'AZYR,‡ GALL,§ ROLANDO,|| REIL,¶ CARUS,** MECKEL,†† and WENZEL.‡‡

Notwithstanding these respectable authorities, it will be evident, from reflection on the ensuing details, that the fibrous aspect depends on the presence of a membrane, and that the white substance itself is pultaceous, semi-fluid, and not solid. We have seen it thus in trepanning a man who had received a gun-shot wound in the head, whose brain escaped through the fractured skull and torn membranes. This substance constantly presents the same appearance after death. When a nerve is cut across, it is driven out by the contraction of the tunics; it escapes from the white portion of the brain and from the spinal marrow, when the surface is slightly wounded. It receives its distinct figure from the membrane that sustains it, on which it is spread, like colour on the canvass forming the ground of a picture. Any person may be convinced of this, by an examination of the encephalon, the spinal marrow, the nerves, the retina, and the terminations of the auditory nerve. This fine membrane is indeed so well known, that we are surprised that authors have not recognized in it the general utility which we have indicated. Malacarne§§ speaks of an epithelium which envelops the white substance, and which is a continuation of the pia mater. Vicq-d'Azyr|||| found the tænia semicircularis covered by a firm, transparent, lamina. There is, according to Gall,¶¶ a neurilema situate between the two medullary strata which form each circumvolution of the brain. Reil*** speaks of a fine membrane situate on the surface of the medullary organs. KEUFFEL††† distinguishes in the spinal marrow, the white pultaceous substance from another, which is fibrous and more compact. Wenzel‡‡‡ says, that the ventricles are lined by a membrane. The white substance is then composed of two elements: one, pultaceous, which is the essential part of it; the other, membranous, which gives solidity to the former, and causes the fibrous appearance which this organ presents.

We cannot quit this subject without speaking of the opinion which is in opposition to what we have advanced, and without giving an exposition of the researches of modern anatomists on the intimate structure of the cerebral substances. Gall calls ganglions "the swellings composed of gelatinous substance, which is greyish in animals of the

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* *Esposizione della Vera Strut. del Cervelleto*, No. 95.
† *Observations on the Nervous System*, page 25.
‡ *Traité d'Anat. et de Phys.* Pt. iv. x. &c.
§ *Anat. et Physiol. du Cerveau*, i. 237.
|| *Saggio della Vera Struttura del Cervello*, page 11.
¶ *Archiv. fur die Physiol.* ix. 143, 173.
** *Darstellung des Gehirns*, 39.
†† *Mensliche Anatomie*, i. 267, 278.
‡‡ *De Penitiore Structura Cerebri.*
§§ *Encefalotomia*, P. ii. No. 33, 35, 45, &c.
|||| *Traité d'Anat. et de Phys.* pl. v. vi. viii. ix.
¶¶ *Anat. et Phys. du Cerveau*, i. 298.
*** *Archiv. fur die Physiologie*, xi. 91, 101.
††† *Dissert. de Medulla Spinali*, § 15.
‡‡‡ *De Penit. Structura Cerebri*, p. 69, 85.

inferior class. The more considerable these masses are, (he says,) the more numerous are the nerves which spring from them. Now, these same conditions being present in animals of the highest class, we should regard these ganglions as the origin of the nerves. No nerve comes from another nerve; but each takes its origin in its proper mass of gelatinous substance, which is the matrix and nutritive matter of the nerve. Wherever the grey substance exists, we should suppose that there is the commencement of nerves; and he who commences his descriptions by nerves already formed, proceeds in a way that is contrary to the laws of nature. What is more conformable to reason than to commence investigations at the same point where nature began her work? It was not ascertained that the nervous fibres owed their origin and support to the grey substance. The fibrous structure of the white substance, (says this author,) should be recognized as a thing demonstrated: besides, the idea of its being a pulpy matter contradicts all that is known of anatomical and physiological phenomena." Gall nevertheless acknowledges, " that the brain is composed of fibres of such a degree of delicacy, that it may be only a uniform mass." The cortical substance tends, according to Reil,* to the globulous structure, and the medullary part to a radiated structure. Wenzel † believes almost all the substances of the human body to be formed of round corpuscules, which are formed of a common cellular substance, and of another proper to each organ, and enclosed in the cells. He considers, with respect to the brain, the grey substance as the seat of sensation and of the particular function of each organ, and the white appears to him to serve as a conductor. The matrix of the nervous parts is, according to Carus, ‡ composed of globules, which are the type of animal organization, and are disposed in lines and in membranes. The cortical and medullary substances only differ in consequence of the globules being disposed in right lines in the latter, whilst in the former they constitute a thick tissue.

Our intention is not to refute the opinions of others, and still less to enter into discussion with any person whatever; we shall, therefore, confine ourselves to the following observations. Persons versed in the use of the compound microscope, see the elements of the human body, and of bodies in general, in a globular form, as DELLA TORRE;§ in a tortuous form, as FONTANA;‖ in a serpentine form, as MONRO;¶ and it is ascertained that all those appearances are merely optical illusions: it is then superfluous to dwell on the consideration of elementary forms. With respect to the relation between the grey and white substances, we had previously recognized the extreme importance of the grey; and we know that BÖERHAAVE** said, an age since, that the white had its origin in the grey substance.

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* *Archiv. fur die Physiologie*, ix. 487.
† *De Penit. Struct. Cereb.* 37, 69.
‡ *Darstellung des Gehirns*, 54, 59, 66.
§ *Nuovi Osservasioni Intorno sulla Storia Naturale*, page 144.
‖ *Venin de la Vipère*, ii. 209, &c.
¶ *Observations on the Structure of the Nervous System*, tab. xxviii.
** *Institut. Rei Med.* § 237.

The vessels of the brain.—The blood-vessels, arterial and venous, are disposed in a particular manner in the organs under consideration. The encephalic arteries* are derived from the internal carotid and vertebral arteries: the latter unite into a single trunk, the basilary artery, the branches of which form, with those of the carotids, the arterial circle of Willis, so that there exists a communication between all the encephalic arteries. The spinal marrow receives its branches from the vertebral, dorsal, lumbar, and sacral, arteries. These vessels carry with them the pia mater into the cerebral substances: they traverse, in the hemispheres of the cerebrum, and in the lobes of the cerebellum, the grey substance to penetrate into the white substance; but, in the corpus callosum, and in the crura of the cerebrum, the white substance is the first which receives them. The final arterial ramifications are so delicate, that they have not yet been filled with the matter of injections, which in the brain does not return by the veins. The latter† are formed by very thin tunics; they end in the sinuses placed between the laminæ of the dura mater, of which those that receive the cerebral veins terminate in the internal jugular veins; the sinuses of the spinal marrow discharge themselves into the vertebral, dorsal, lumbar, and sacral, veins.

Lymphatic vessels have not yet been perceived in the brain. Monro‡ considered that it must possess them. Cruickshanks§ detected a lymphatic gland in the carotidian canal. He thence concluded that lymphatic vessels existed in the brain. Mascagni‖ described and figured lymphatics in the membranes of that organ, but he could not perceive them in the cerebral substances.

Dissection of the Brain.—There are several modes of dissecting the brain: one consists in removing the substances by horizontal and oblique slices; this method bears the name of Vesalius when it is practised from the upper to the inferior part, and that of Varolius when we proceed from below upwards. The other mode of operating, that of scraping the brain with the edge of the scalpel, is necessary for the perfect development of the different parts of this organ. Malacarne and Gall recommended it. Both of them have practised it on the fresh brain.

There are some circumstances in which it will be necessary to harden the brain before it is examined. This may be effected either by boiling it in oil, or by macerating it for several days in alcohol, or a solution of corrosive sublimate or of alum, and afterwards plunging it for several hours in pure water, to diminish its too-great rigidity. The brain thus prepared is torn with the fingers and the handle of the scalpel, in following the direction of the apparent fibres. Reil points out the mode of proceeding on this occasion.

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* Haller, *Icones Anat. Fasc.* vii.; Vicq-d'Azyr, *Traite d'Anat. et de Physiol.* pl. xix.

† Vieussens, *Neurologia*, liv. ii. chap. 2; G. Lauth, *Spicilegium de Vena Cava Superiori*, p. 74.

‡ *Observations on the Structure of the Nervous System*, p. 17.

§ *The Anatomy of the Absorbing Vessels*, page 185.

‖ *Vasorum Lymphat. Historia*, p. 65; tab. xxvii. f. 1, 2, 3.

We cannot always do without the assistance of optical instruments; but, in these cases, a good simple convex glass is preferable to the compound microscope, because of the illusions of the latter, against which we cannot take too many precautions.

Division of the Brain.—The brain is divided into a superior and most considerable portion, termed the *cerebrum*; and the *cerebellum*, which is the small portion placed inferiorly and posteriorly.

We shall commence the examination of the cerebrum by its surface, superior as well as inferior, on which we find numerous furrows and three openings which lead into the interior cavity of the organ. We shall give to the whole of these objects the name of the *peripherical arrangement*; and we shall treat particularly of the hemispheres, the circumvolutions, the fissure of Sylvius, the ventricles, and the plexus choroides. These parts form about the half of the cerebral mass.

When the hemispheres are removed, the *centrum ovale* and the *corpus callosum* become exposed to view. If we cut through the centrum ovale at a short distance from the corpus callosum, we perceive that its inferior surface is continuous with the *septum lucidum*, which rests on the fornix, itself supported by four pillars, two situated anteriorly and two posteriorly. The latter accompany the *cornua ammonis*, which are themselves the continuation of the two angles of the posterior extremity of the corpus callosum. Each of those cornua descends in the inferior horn of the lateral ventricle of the same side, in the course of an inclined plane from behind forward, which cuts the middle lobe of the cerebrum into two parts by its diagonal. Thus, the corpus callosum, the septum lucidum, the fornix and its pillars, the cornua ammonis, the inferior portion of the middle lobe, and the posterior lobe of the cerebrum, are especially connected together, and form what we term the *department of the corpus callosum*.

The portion of the cerebrum which remains after the separation of the department of the corpus callosum, appertains to the *department of the crura cerebri*, where we find the corpora striati; the tænia semicircularis; the thalami optici; the third ventricle; the two commissures, anterior and posterior; the crura cerebi; the anterior lobes, and the superior portion of the middle lobes.

The pituitary gland and infundibulum are parts which should be separately considered. They form an *appendage* to the cerebrum.

The other portion of the encephalic mass is the *cerebellum*, situate under the tentorium, in the occipital fossa. We here observe the lobules, the processus vermiformis, the corpora striata, the crura cerebelli, the arbor vitæ, and the pedunculi.

After the cerebrum and the cerebellum, we shall separately consider the *pons Varolii*, because it does not appertain particularly to either of those two organs, but the substances of both of them enter into its composition. We shall call it the *pons inferior*, to distinguish it from the *pons superior*, which is commonly known under the name of the *tubercula quadrigemina*, which is more especially a pons than that of Varolius, and which, like the latter, is composed of the substances of the cerebrum and cerebellum. The pons Varolii is situate at the basis of the cerebrum, near the centre of the basis of the cranium. The

superior pons occupies the centre between the cerebrum and cerebellum.

The *medulla oblongata*, which rests on the basillary fossa, forms a continuation of the two pontes, as being connected to the posterior part both of the pons Varolii and the tubercula quadrigemina. It is continuous with the *medulla spinalis*, which is enclosed in the vertebral canal.

The history of the encephalon and the medulla spinalis comprises also the description of the origin and of the structure of the *nerves*, which leave the cranium and the vertebral canal to be distributed throughout the body.

These organs exist for the most part in pairs, and are placed on each side of the axis of the body. The impairal nerves occupy the axis itself, and are divided into two equal lateral portions. All these parts, pairal as well as impairal, have consequently a symmetrical structure.

The subject under consideration will therefore be distributed in the following manner:

1, The cerebrum, *(peripherical arrangement; department of the corpus callosum; department of the crura cerebri; appendix of the cerebrum;)* 2, the cerebellum; 3, the pontes; 4, the medulla oblongata; 5, the spinal marrow; 6, the nerves.

(To be continued.)

A Memoir on Ileus, and on a particular Method of Treating it. By J. D. Brandis, Member of the Royal Society of Medicine of Copenhagen.

[From the *Nova Acta Regiæ Societatis Medicæ Hauniensis*, 1818; as abridged in the *Nouveau Journal de Medecine.*]

"In the year 1794, being at Brunswick, where I was practising medicine, I was called to a patient, who was attacked eleven days previously with ileus, and in whom the symptoms were most alarming,—such as delirium, coldness of the extremities, hiccup, facies hippocratica; leading me to fear the near approach of death, and leaving less reason for hope, from many remedies having been used by physicians of eminent abilities. I recollected the method of treatment that Frederick Hoffmann had once seen employed by Naboth, and to the use of which he had only consented by a sort of condescension. The result was more fortunate than Hoffmann had expected. On cold water being administered several times a day, in doses of two glasses, the trunk and feet being previously well covered, a copious sweat broke out, to which succeeded a tranquil sleep; and the pain in the bowels, as well as the vomiting, had ceased. Naboth moreover stated, that he employed with success, in three cases, compresses moistened with cold water over the abdomen. Many other physicians, as De Haen, Chavasse, Stoll, and Van Swieten, had also obtained good effects from those means, in analogous cases. I consequently determined to have recourse to them in the one that was presented to me. I prescribed the use of an iced drink, and had the belly covered with cloths dipped in iced water. In a few hours the delirium ceased: twenty-

four hours afterwards the extremities had recovered their natural heat, the hiccup was less frequent, the vomiting more rarely occurred, and gradually entirely ceased. Yet the constipation continued, notwithstanding the use of cold and warm enemas frequently repeated. The appetite was almost extinct, and the patient only took a little animal jelly mixed with ice. I prescribed opium in small doses, and the decoction of cinchona also mixed with ice. The patient continued about seven days in this state. During this time the omission of the cold fomentations to the abdomen constantly gave rise to returns of the vomiting; so the patient himself desired their re-application. At length, on the seventh day, a copious diarrhœa came on: the cold fomentations were then suppressed, having become useless; and in the space of four days, with the aid of cold and nutritive food, the re-establishment of health was complete.

"After such unexpected success, I placed my whole confidence in this measure, and my hope has never been deceived. I have applied cold fomentation on the abdomen of delicate women as well as of robust men, and I have found in it a sure and prompt remedy. I have used it in a man 68 years of age, on the eighth day from an attack of ileus, which left nothing to hope. This old man was cured, although there was in the inguinal ring a small and immobile herniary tumor, with gangrene of the portion of the epiploon, and the formation of an abscess between the abdominal muscles.

"In 1814 I had, for the tenth time, occasion to experience the good effects of this method, conjointly with our celebrated Callisen and Dr. Strom.

"A woman, 22 years of age, the mother of two children, was subject to spasms of the intestines, vomitings, and colics, at every menstrual period. She was attacked with ileus in the month of January, after exposure of the feet to cold, towards the epoch of menstruation. She not only vomited all she swallowed, but enemas, prepared with assafœtida, were also thus rejected: to this symptom were added coldness of the extremities, obstinate hiccup, and a frequent small pulse, that led us to presage a fatal termination. After the sixth day I prescribed, in the first instance, some glasses of iced water and the tinctura thebaiaca, combined with two parts of the essence of castoreum. Four hours afterwards there was no amendment; the medicines had been rejected, and the symptoms were still more severe. I prescribed cold fomentations, and increased the dose of the anodyne tincture to thirty drops.

"Six hours afterwards, the vomiting had only once occurred; the hiccup was less fatiguing, the extremities were warm. I directed neither glysters nor any other remedy proper to provoke evacuations, from the fear of exciting anti-peristaltic contractions of the large intestines. I continued the use of the same means for four days: on the sixth day of this treatment the bowels were spontaneously opened, and the patient became convalescent.

"It is of the greatest importance in the administration of this remedy, to insist on it with perseverance. In the first patient, the use of it was continued for nine days; in two others, during twenty-four

hours. I have had recourse, with success, to the same remedy in many other affections, and particularly in very violent colics, and in dysentery without fever.

"The good effects I have obtained from the use of ice in ileus, would not lead me to advise it in all cases without discrimination, and to the exclusion of all other means. I have seen, in one case, the extraction of a carious tooth put a stop to all the symptoms of ileus. A woman, about 20 years of age, was taken, at the time of her menses, with a very violent tooth-ach: some person advised to place a piece of very cold iron between the gums and the cheek; the pain disappeared; but at the same time the belly became painful, the extremities cold; the patient was seized with continual vomiting, and the alvine evacuations were suspended. Being called on the third day, I prescribed the use of ice, but with little advantage. The manner in which the disease had first appeared, furnished a special indication: the tooth was drawn; all the symptoms were suddenly alleviated, and a few hours afterwards the bowels were opened without the aid of medicine.

Medical and Philosophical Intelligence.

NOTICE OF SUCH OF THE TRANSACTIONS OF PHILOSOPHICAL SOCIETIES, AS RELATE TO MEDICINE AND ITS AUXILIARY SCIENCES.

ROYAL SOCIETY of LONDON. July 1st.—A PAPER was read by ARTHUR JACOB, M.D. demonstrator of anatomy at Trinity-college, Dublin, giving an account of his discovery of a new membrane in the eye, covering the external surface of the retina, and united to it by cellular substance. It may be displayed by cutting off the sclerotica and choroides, and looking on the retina in water, when it will be seen floating above the surface of the retina.

AT a sitting of the *Faculty of Paris* on the 6th of May, Professor DUPUYTREN mentioned having a patient under treatment, on whom he was employing compression for the cure of a wound of the femoral artery by a stroke from a knife. He mentioned several facts that have occurred to his observation, which lead him to conclude, contrary to the opinion generally adopted, that wounds of arteries may be cured without either the obliteration of their cavity, or the subsequent formation of aneurism. He has presented a patient with a rupture of the femoral artery as it crosses the third adductor muscle, whom he also intends to treat by his plan of compression.

M. Dupuytren, a short time since, tied the subclavian artery at the situation of its passage across the scalenus muscle, by making an incision in the anterior part of this muscle, for a false aneurism of the vessel. His motives for tying the artery in this situation rather than in its course between this muscle and the clavicle, were, that in the former point the vessel is completely separate from the vein and the nerves of the brachial plexus, whilst in the second it is confounded with those parts, and can only with difficulty be separated from them. This case terminated favourably.

M. Fol, a surgeon of Vandœuvres, near Geneva, has recently published* *a case of Tetanus*, that terminated favourably under the use of mercurial frictions, jalap, and narcotics exhibited internally and applied externally. The patient was a stout and healthy common labourer, 27 years of age: the disease originated from the nail of the right thumb being nearly torn off. In somewhat less than a month after the accident the symptoms of tetanus appeared. He had, Oct. 5th, frequent and severe rigors; great stiffness of all the voluntary muscles; those of his jaw were painfully contracted; and the abdomen was very tense. The pulse on the preceding evening was languid, and some apprehension was formed that the heart was somewhat affected. On this day, the 5th, the pulse was more developed, but still contracted. A dose, composed of three grains of calomel, fifteen grains of anodyne powder,† three grains of jalap, and twelve grains of salt of amber, was given every two hours. Frictions with mercurial ointment were made along the spine, the body generally rubbed with oil, and to the abdomen were applied warm fomentations. Glysters of assafœtida and watery solution of opium, were given every four hours. Fumigations of opium and salt of amber were also employed: this was effected by burning under the bed-clothing, on lighted wood in a proper machine, a powder composed of half a drachm of salt of amber and fifteen grains of opium. The disease was almost entirely relieved in five days, and finally totally disappeared.

Dr. Firth, of Hyde-park, South-Carolina, has cured a case of the same disease by the use of opium, cantharides, a decoction of *asarum canadense* as common drink, with the warm-bath every three hours.‡ The patient was a female negro: the disease seemed to originate from a wound by a nail in the right *malleolus externus*. The disease appeared on the day preceding that on which Dr. Firth first saw her. "Her jaws were now fixed; and every half-hour she had a violent attack of opisthotonos." He scarified the punctured ankle very deep, "so as to divide any of the nervous branches which might be injured; poured in spirit of turpentine, and applied a dossil of lint impregnated well therewith, over which was placed a poultice." A drachm of tincture of cantharides, and the same quantity of tincture of assafœtida, was given every three hours. The disease was somewhat alleviated. Perfect relaxation of the jaw took place whilst the patient was in the bath, but the contraction returned on leaving it. Blisters were then applied to the temporal muscles, nape of the neck, and the spine of the back; she was purged with calomel and gamboge, and had glysters given her. "I observed," says Dr. F. "that, whenever the blisters discharged freely and strangury existed, the disease was moderated, the spasms occurred but seldom, and the jaws were relaxed: when the strangury subsided, the disease increased in violence. The following was then ordered:

* In the *Journal Universel des Sciences Medicales*, July 1819.

† We regret that we are not able to give the exact composition of this; but it contains a considerable proportion of opium.—Edit.

‡ This case is related in the *New-York Medical Repository*, April 1819.

Take, tinct. cantharid. . . . ℥ iij ſs.
—— opii . . . . ℥ iij ſs.
Sp. lavend. comp. . . ℥ ij M.

To take one table-spoonful five times in the twenty-four hours. The jaws were rubbed five times a-day with a lump of mercurial ointment, the size of a nutmeg.

She recovered in a few days, though a stiffness of the jaw remained for some time longer; but which disappeared on salivation taking place.

The attending physicians of the New-York Dispensary, Doctors Dyckmann, Cheesman, Cockroft, and Townsend, accompanied by Doctors Aydelott and Ducachet, had an opportunity, during the last month, of verifying the curious discovery, by Prof. Richerand, of the *transparency of the pericardium;* which they find to be true in the dead as well as in the living subject. The case occurred in the examination of a mulatto-child of two years of age, twelve hours after death. The child had died of the febrile remittent of infants: there were two or three ounces of colourless water in the pericardium, a considerable quantity in the brain, and the body was yet warm.

The transparency observed in the above subject has, no doubt, existed as long as the warmth of the body.—*New-York Medical Repository*, April 1819.

M. Bouillon-Lagrange has given, in the *Journal de Pharmacie*, June 1819, the *composition of a topical application for indurated tumors in the female breast*, which he has found remarkably efficacious. Several cases, threatening to appear in a cancerous character, have been much, or even totally, removed by it. It acts, he says, with a singular influence on the exhalents of the skin; from which a large quantity of reddish-coloured viscous secretion takes place, "soon producing the solution and disappearance of the most voluminous and hard tumefaction of the glands." It is as follows:

Take, simple plaster (litharge plaster) four ounces; melt it with a gentle heat in an earthen vessel, and add one ounce of yellow wax, half an ounce of white soap, and four drachms of turpentine: these are to be melted together, then removed from the fire, and two drachms of powdered cicuta, two drachms of powdered sulphuret of potash, and four drachms of powdered camphor, then added. To be well mingled, and made into rolls.

The use of *animal magnetism* has been prohibited in all the provinces of the Austrian empire: a public censure has been passed on those physicians who had encouraged the delusion of its application; and they are interdicted from again employing it, under the penalty of suspension of their functions. Such a measure had become highly necessary, for it seemed to be recently gaining ground to a serious extent. Many physicians of high character encourage it at the present time in Germany; and there is a periodical journal (*Archiv für den thiereschen Magnetismus*, published at Halle, by Drs. Escherrmayer, Kieler, and Nasse,) instituted for the purpose of recording their practice and opinions.

REPORT OF DISEASES.

WE have to repeat, in the present Report, the remark made in the three or four preceding ones, that the present state of the inhabitants of the metropolis is particularly healthy. No affection is so prevalent as to bear at all the appellation of an epidemic, and there does not exist any general and severe form of disease. The present, and the two or three subsequent months, are indeed generally the most salubrious to the inhabitants, taking into the calculation of the number of patients, the comparative emptiness of the city, and the consideration that those who have now left it form a great proportion of the number of invalids, wherever they may be present.

The most common acute disease is diarrhœa, not often accompanied with much, or even any, fever. This has generally soon subsided, under a regimen of restriction from all solid and irritating food, with the use of rhubarb, ipecacuanha, and occasionally small doses of opium and the absorbent earths. Some cases have been most effectually relieved by saline purgatives; and others, by small doses of tartar emetic. The most severe cases have been those that have in the first instance, as is very common with the vulgar, been treated by cordials, or large doses of opiates and astringents. One instance of this kind, in a previously healthy middle-aged man, has been followed by remittent fever, occurring in paroxysms accompanied by pain in the intestines, followed by mucous stools.

Pneumonic inflammation is not an uncommon occurrence; sometimes without much fever, at others with affection of the brain and the usual symptoms of typhus. The latter has appeared chiefly in either the lower classes of people, those of intemperate habits, or when the disease has been mismanaged in its first stage. It is lamentable to witness the fear of blood-letting entertained by some practitioners, because what is commonly termed *typhoid* debility may be present, notwithstanding the practical evidence that has been accumulating during the last century, especially, to show its necessity; and the satisfactory doctrine that such debility is, when the patient has previously to the attack been in health, either partial from a concentration of vital action in some organ, or the necessary consequence of a compressed brain; as Dr. KINGLAKE has well explained in the present number of this Journal.

Cutaneous eruptions (chiefly *ecthyma* and *eczema*) are common in children, evidently forming one symptom of a train of morbid affections originating in gastric disorder, and commonly appearing suddenly, and suffering exacerbations and remissions, subsequently to internal disease, and attacks of febricula.

Peritoneal inflammation, which we mentioned to be rather prevalent, has suddenly disappeared from the list of maladies. It seems to be changed for affections of the mucous membranes.

Rheumatism is one of the most distressing of the chronic complaints, and the form of it that occurs especially at this season is that which most obstinately resists medical treatment. The patients of it very frequently have been victims to various other disorders, sometimes of an anomalous character, and are commonly in a debilitated state. Perhaps the rheumatic affection should not be much regarded in the treatment.

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METEOROLOGICAL JOURNAL.

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From the 20th July to the 19th August, 1819, inclusive.

Day of Month.	Rain guage	Moon.	THERM.			BAROM.		De Luc's HYGROM. Dry	Damp		WIND.		ATMOSPHERIC VARIATION.		
July															
20	,15		65	73	53	29·40	29·42		11	11	SSW	N	Fine		Rain
21	,20		56	63	52	29·53	29·88		12	8	N va.	WNW	Cloud.	Sho'ry	
22	,09	●	58	65	55	30·00	30·08		7	7	N va.	N	Fine		
23			63	66	62	30·16	30·18		8	8	NNW	WSW	Fine		
24			68	76	60	30·20	30·22		7	7	N	SW	Fine		
25			70	79	58	30·12	30·03		9	10	SW	SSE	Fine		
26			67	73	58	30·04	30·10		10	9	E	E	Fine		
27			66	76	58	30·13	30·17		10	9	NE	ENE	Cloud.	Fine	
28			65	76	58	30·16	30·17		9	8	NE	NE	Cloud.	Fine	
29			64	76	59	30·16	30·12		11	10	NE	NE	Cloud.	Fine	
30		☾	70	82	63	30·10	30·06		8	3	NE	NE	Fine		
31			70	78	64	30·03	30·04		9	9	ENE	ENE	Fine		
Aug.															
1			71	76	60	30·05	30·02		10	11	NE	ESE	Cloud.	Rain	Cloud.
2	,20		63	71	61	30·00	29·92		11	8	ENE	NNE	Cloud.		Fine
3			63	70	61	29·92	29·93		7	7	NE	NE	Cloud.	Fine	
4			65	69	62	29·91	29·92		9	10	N	N	Cloud.		
5		○	64	67	61	29·93	30·00		11	12	N	N	Cloud.		
6			66	75	64	30·04	29·95		9	12	W	W	Cloud.	Fine	Cloud.
7			70	78	62	33·03	30·03		12	10	NW	NE	Fine		Cloud.
8			67	70	61	30·09	30·12		6	5	N	N	Fine		
9			71	76	64	30·15	30·11		5	7	NE	ESE	Fine	Sho'ry	Fine
10			70	75	58	30·09	30·05		6	8	ESE	SE	Fine		
11	,02		61	76	61	30·00	29·95		11	9	ESE	SE	Fog	Cloud.	Fine
12		☽	64	75	65	29·95	29·92		11	8	SE	WSW	Cloud.	Fine	Cloud.
13			70	78	62	29·95	30·00		9	11	W	WSW	Cloud.	Fine	Rain
14			64	75	63	30·03	30·04		8	7	NE	N	Fine		
15	,03		68	72	60	30·10	30·13		7	5	NE	N	Fine		
16			72	78	65	30·18	30·22		8	7	NE	NNE	Fine		Cloud.
17			68	77	64	30·23	30·30		8	9	NNE	NE	Fine		Cloud.
18			66	75	59	30·30	30·29		11	12	NE	NE	Cloud.	Fine	Cloud.
19	,01		65	70	60	30·22	30·20		11	9	ENE	ENE	Cloud.		Fine

The quantity of rain fallen in July, is 1 inch and 24-100ths.